INSTALLATION
AND
OPERATING
INSTRUCTIONS

Models: VH1620E, VHVA1620E, VH1828E & VHVA1828E

COUNTERTOP MODEL
ELECTRIC CONVEYOR OVENS

INTENDED FOR OTHER THAN HOUSEHOLD USE

RETAIN THIS MANUAL FOR FUTURE REFERENCE
OVEN MUST BE KEPT CLEAR OF COMBUSTIBLES AT ALL TIMES

FOR YOUR SAFETY: Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.

WARNING: Improper installation, adjustment, alteration, service or maintenance can cause property damage, injury or death. Read the Installation, Operating and Maintenance Instructions thoroughly before installing or servicing this equipment.

Initial heating of oven may generate smoke or fumes and must be done in a well ventilated area. Overexposure to smoke or fumes may cause nausea or dizziness.

This equipment has been engineered to provide you with year-round dependable service when used according to the instructions in this manual and standard commercial kitchen practices.

ANSI/NSF4

P/N U4173A 2/08

BAKERS PRIDE OVEN CO., INC.
30 Pine Street
New Rochelle, NY 10801

(914) 576-0200 Phone
(914) 576-0605 Fax
(800) 431-2745 US & Canada
www.bakerspride.com Web Address

Bakers Pride takes pride in the design and quality of our products. When used as intended and with proper care and maintenance, you will experience years of reliable operation from this equipment. To ensure best results, it is important that you carefully read and follow the instructions in this manual.
Installation and start-up should be performed by a qualified installer who has thoroughly read, understands and follows these instructions.
If you have questions concerning the installation, operation, maintenance or service of this product, contact our Technical Service Department at (800) 431-2745.

SAFETY PRECAUTIONS

Before installing and operating this equipment be sure everyone involved in its operation are fully trained and are aware of all precautions. Accidents and problems can result by a failure to follow fundamental rules and precautions.

The following words and symbols, found in this manual, alert you to hazards to the operator, service personnel or the equipment. The words are defined as follows:

DANGER: This symbol warns of imminent hazard which will result in serious injury or death.

WARNING: This symbol refers to a potential hazard or unsafe practice, which could result in serious injury or death.

CAUTION: This symbol refers to a potential hazard or unsafe practice, which may result in minor or moderate injury or product or property damage.

NOTICE: This symbol refers to information that needs special attention or must be fully understood even though not dangerous.

GENERAL INFORMATION

THIS MANUAL SHOULD BE RETAINED FOR FUTURE REFERENCE

CAUTION: These models are designed, built, and sold for commercial use. If these models are positioned so the general public can use the equipment make sure that cautions, warnings, and operating instructions are clearly posted near each unit so that anyone using the equipment will use it correctly and not injure themselves or harm the equipment.

WARNING: Check the data plate on this unit before installation. Connect the unit only to the voltage and frequency listed on the data plate. Connect only to 1 or 3 phase as listed on the data plate.

WARNING: Electrical and grounding connections must comply with the applicable portions of the national electrical code and/or other local electrical codes.

WARNING: Disconnect device from electrical power supply and place a Tag Out-Lockout on the power plug, indicating that you are working on the circuit.

WARNING: Install per the spacing requirements listed in the installation section of this manual. We strongly recommend having a competent professional install the equipment. A licensed electrician should make the electrical connections and connect power to the unit. Local codes should always be used when connecting these units to electrical power. In the absence of local codes, use the latest version of the National Electrical Code.

WARNING: This device should be safely and adequately grounded in accordance with local codes, or in the absence of local codes, with the National Electrical code, ANSI/NFPA 70, Latest Edition to protect the user from electrical shock. It requires a grounded system and a dedicated circuit, protected by a fuse or circuit breaker of proper size and rating. Canadian installation must comply with the Canadian Electrical Code, CSA C22.2, as applicable

WARNING: A factory authorized agent should handle all maintenance and repair. Before doing any maintenance or repair, contact Bakers Pride.

WARNING: Never clean any electrical unit by immersing it in water. Turn off before cleaning surface.

WARNING: An earthing cable must connect the appliance to all other units in the complete installation and from there to an independent earth connection.

NOTICE: The unit when installed, must be electrically grounded and comply with local codes, or in the absence of local codes, with the national electrical code ANSI/NFPA70- latest edition. Canadian installation must comply with CSA-STANDARD C.22.2 Number 0 M1982 General Requirements-Canadian Electrical Code Part II, 109-M1981- Commercial Cooking Appliances.

WARNING: ***SHOCK HAZARD*** **-** De-energize all power to equipment before cleaning the equipment.

NOTICE: This product is intended for commercial use only. Not for household use.

NOTICE: Local codes regarding installation vary greatly from one area to another. The National Fire Protection Association, Inc. states in its NFPA96 latest edition that local codes are "Authority Having Jurisdiction" when it comes to requirements for installation of equipment. Therefore, installation should comply with all local codes.

IMPORTANT FOR FUTURE REFERENCE

Please complete this information and retain this manual for the life of the equipment. For Warranty Service and/or Parts, this information is required.

Model Number	Serial Number	Date Purchased

Notes:

TABLE OF CONTENTS

SECTION	*ITEM*	*PAGE*
1	Receiving	5
2	Location & Minimum Clearances	5
3	Installation	5
4	Stacking	6
5	Electrical Connections	6
6	System Check	8
7	Initial Start-Up	10
8	Shutdown	11
9	Special Features	11
10	Cleaning	12
11	Operator Maintenance	13
12	Rating Plate	14
13	Conveyor Removal	15
14	Conveyor Installation	15
15	Conveyor Belt Speed Calibration	16
16	Troubleshooting Guide	18
17	Temperature Control Conversion Chart	23
18	Solid State Relay Identification	24
19	Electrical Schematics & Wiring Diagrams	26
	A. VHVA1620E Schematic, 208, 220 or 240VAC, 1 Phase	26
	B. VHVA 1620E Wiring Diagram, 208, 220 or 240VAC, 1 Phase	27
	C. VHVA1620E Schematic, 208, 220 or 240VAC, 3 Phase	28
	D. VHVA 1620E Wiring Diagram, 208, 220 or 240VAC, 3 Phase	29
	E. VH 1620E Schematic, 208, 220 or 240VAC, 1 Phase	30
	F. VH 1620E Wiring Diagram, 208, 220 or 240VAC, 1 Phase	31
	G. VH 1620E Schematic, 208, 220 or 240VAC, 3 Phase	32
	H. VH 1620E Wiring Diagram, 208, 220 or 240VAC, 3 Phase	33
	I. VHVA 1828E Schematic, 208, 220, or 240, 1 Phase	34
	J. VHVA 1828E Wiring Diagram, 208, 220, or 240, 1 Phase	35
	K. VHVA 1828E Schematic, 208, 220, or 240, 3 Phase	36
	L. VHVA 1828E Wiring Diagram, 208, 220, or 240, 3 Phase	37
	M. VH 1828E Schematic, 208, 220, or 240, 1 Phase	38
	N. VH 1828E Wiring Diagram, 208, 220, or 240, 1 Phase	39
	O. VH 1828E Schematic, 208, 220, or 240, 3 Phase	40
	P. VH 1828E Wiring Diagram, 208, 220, or 240, 3 Phase	41
20	Parts Lists & Exploded Views	42
	A. External Covers	42
	B. Conveyor Assembly	42
	C. Blower Motor Cover Assembly	43
	D. Blower Assembly	43
	E. VH Series Only	43
	F. Plenum “Finger” Assembly	43
	G. Main Power Control Box	44
	H. Electric Control Box	45
	I. Cool Down Thermostat, Elements, Switch & Probe	46
21	Warranty	47

I. INSTALLATION INSTRUCTIONS

MODELS COVERED	TOTAL KW	PHASE
VH1620E	6.4	1 or 3
VHVA1620E	6.4	1 or 3
VH1828E	12.4	1 or 3
VHVA1828E	12.4	1 or 3

1. RECEIVING

Read the notice on the outside carton regarding damage in transit. "CONCEALED DAMAGE", damage discovered after opening the crate(s), MUST be reported immediately to the carrier. The carrier will perform an inspection of the damage and furnish forms for the consignee's claim against the carrier. Retain ALL packaging material - including outer carton, until the inspection has been completed.

Proper and secure storage facilities should be arranged for the conveyor oven(s) if necessary to protect it from outdoor or damp conditions at all times prior to installation.

2. LOCATION AND MINIMUM CLEARANCES

Adequate air space must be provided for the proper venting of the rear exhaust air and provision made for venting of cooking vapors. The Conveyor Oven must be installed in a well-ventilated area.
NOTE: Attached rear rubber bumpers must not be removed and can contact a rear wall if present.

Conveyor Ovens can be installed with "ZERO" clearances (back and sides) from combustible and non-combustible materials. (Rear rubber bumpers are the “Zero” clearance points on the back of the unit.) S e e rating plate attached to the control box door panel.

The Conveyor Oven is intended for countertop mounting if mounted on the 4" legs provided. The Oven is NOT approved for mounting on any floor. Keep the area around your conveyor oven free and clear of all combustible materials.

3. INSTALLATION

Place the conveyor oven and parts as close to the area of final installation before uncrating. Your conveyor oven is packed sitting on its bottom. Leave it this way until unpacked. The pallet may be left under the conveyor oven for convenience in further handling. Unpack carefully to avoid damage to the unit. If concealed damage is discovered, follow the instructions detailed in Section 1 above.

DO NOT LIFT EXCESSIVE WEIGHT

A. Legs are shipped unattached. Make sure each leg is attached and tightened before placing the conveyor oven in place. Each leg is adjustable to accommodate variations in the mounting surface.

B. Using sufficient help (2 or more people), lift the conveyor oven upward and place on the countertop surface. Lift the conveyor oven by gripping the bottom of the unit. THE FOLLOWING ITEMS ARE NOT TO BE USED AS LIFTING "HANDLES": Side-mounted control boxes (2), removable front door (with handles), the conveyor belt assembly, the rear fan housing assembly.

C. ***THE CONVEYOR BELT ASSEMBLY IS MOUNTED BACKWARDS FOR SHIPPING. THE CONVEYOR BELT ASSEMBLY MUST BE REMOVED AND REVERSED PRIOR TO OPERATION.*** See Section 6a, b for further instructions.

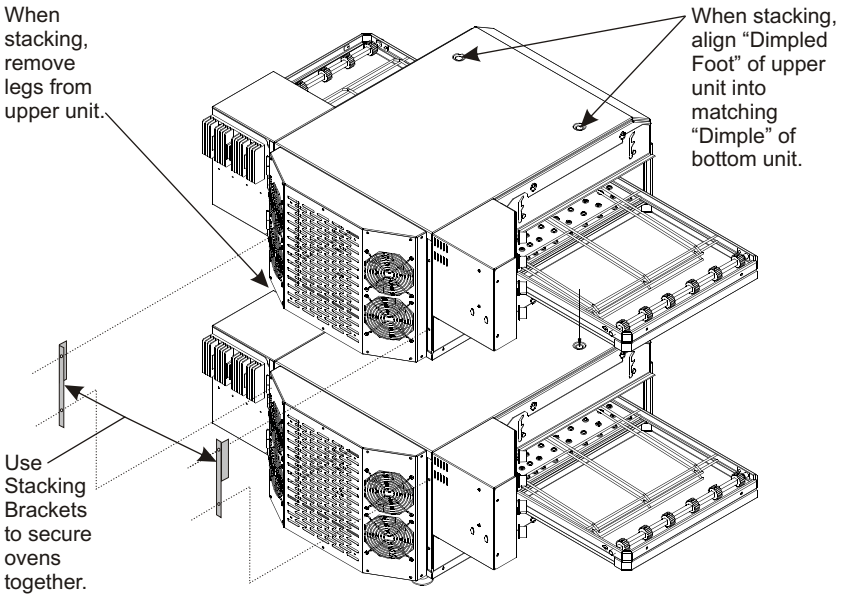
D. Position the conveyor oven in its final location, maintaining the minimum clearances specified in Section 2 above.

E. Remove all loose parts and packages from the interior of the conveyor oven. The conveyor oven has (4) air-directing "plenum fingers" in the interior cooking chamber. Check these items for proper mounting. For further information on removal and mounting of interior panels, see Section 10, cleaning.

4. STACKING

Your conveyor oven(s) can be stacked up to (3) high. Each unit is built exactly the same, so it does not matter in which order they are stacked. For stacking of (2) units, remove the legs from the second (upper) unit prior to mounting on top of the bottom unit. For stacking of (3) units, it is preferable to use a "stacking kit", which allows all conveyor ovens to be supported by an external framework, such as a table, with each conveyor oven having all legs removed.

"CAUTION: If you use a multiple stack assembly, remember that each oven has its own power disconnect. Make sure ALL main switches are OFF before any cleaning or maintenance is performed."



1. Remove two bottom screws from the top oven rear panel.
2. Remove two top screws from the bottom oven rear panel.
3. Install the right and left stacking brackets as shown in above diagram.
4. Reinstall the four removed screws.

5. ELECTRICAL CONNECTIONS

General Instructions

a) Only use copper conductor wires rated at 90°C suitably sized for the electric current drawn.
b) Dual Air Model 1828E ovens are constructed for permanent connections - no power cord is supplied.
c) Dual Air Model 1620E ovens are supplied with a flexible power cord and plug.
d) Make sure the electrical supply corresponds with that specified on the rating plate.
e) Only a licensed electrician should make the electrical connections.
f) Proper connections are shown on the wiring diagrams as well as the rating plate.
g) Wiring diagrams are located in the control box containing the Main Switch (green rocker).
h) When installed, the unit must be electrically grounded in accordance with the local codes and/or the latest edition of the national Electrical Code ANSI/NFPA No. 70 in the USA or Canadian Electrical Code, CSA Standard C22.1, Part 1 in Canada.

VH-, VHVA1620E: POWER SUPPLY (EACH) 6.4 KW/Hr				
Volts	**Phase**	**L1**	**L2**	**L3**
200-208	1	31	31	N/A
220	1	29	29	N/A
230	1	28	28	N/A
240	1	27	27	N/A
200-208	3	14	21	19
220	3	13	18	17
230	3	12	17	16
240	3	12	18	17

VH-, VHVA1828E: POWER SUPPLY (EACH) 12.4 KW/Hr				
Volts	**Phase**	**L1**	**L2**	**L3**
200-208	1	60	60	N/A
220	1	56	56	N/A
230	1	54	54	N/A
240	1	52	52	N/A
200-208	3	27	40	38
220	3	25	38	36
230	3	24	36	34
240	3	23	35	33

EACH CONVEYOR OVEN REQUIRES A SEPARATE CONNECTION

CAUTION: Normal cooking operations may result in the production of smoke or fumes and may cause nausea and dizziness. Be sure the oven is placed in a well-ventilated area.

Field Connections

NOTE: VERIFY THAT INPUT POWER MATCHES THE OVEN POWER REQUIREMENTS STATED ON THE RATING PLATE, WHICH IS LOCATED ON THE POWER CONTROL BOX.

IF INPUT VOLTAGE DOES NOT MATCH OVEN VOLTAGE REQUIREMENTS, THE CORRECT CONVEYOR OVEN MUST BE INSTALLED. THE CONVEYOR OVEN CANNOT BE MODIFIED IN THE FIELD TO MATCH INPUT POWER.

CAUTION: *FOR 3 PHASE UNITS ONLY:* VERIFY VOLTAGE OF EACH LEG. IF ANY LEG HAS A VOLTAGE GREATER THAN 240V THIS LEG MUST BE CONNECTED TO L-3 ON THE POWER DISTRIBUTION BLOCK.

FOR DUAL AIR MODELS VH1620E, VHVA1620E:

These units are supplied with a flexible power cord, according to the specification placed with the original order, which specified either single-phase or three-phase operation. No internal field connection is necessary. All internal connections are complete. Connect the power cord to the proper power receptacle. (see diagram below).

Note: If a different power cord is required than supplied, the correct power cord must be obtained from a factory authorized service agent. Only an authorized service agent is to replace a power cord.

FOR DUAL AIR MODELS VH1828E, VHVA1828E:

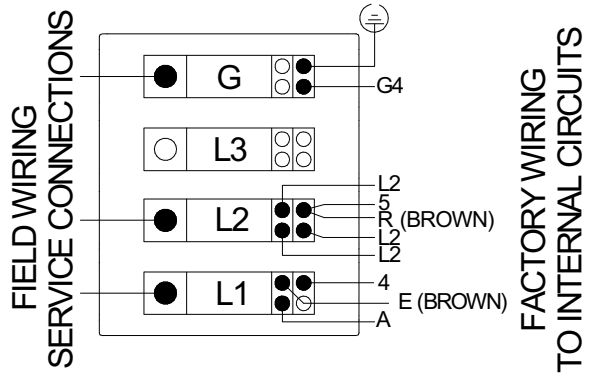
a) Remove the cover from the Power Distribution Box Panel (under the control box on right side when facing front of unit).

b) Locate the 4-pole Power Distribution Terminal Block mounted in the Power Distribution Box.

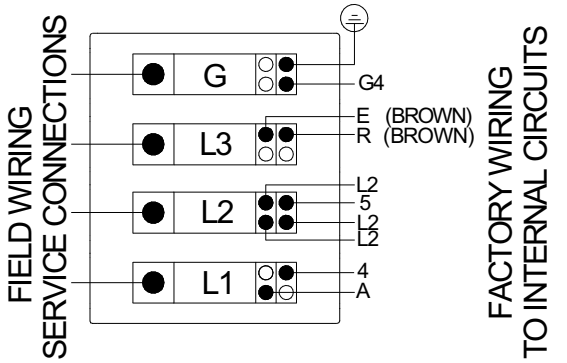
c) Install the proper strain relief for the **PERMANENT CONNECTION** utilizing the knock-out hole provided. The strain relief should be securely fastened.

d) Supply the proper conduit to the conveyor oven and connect through the strain relief. Connect properly-sized, copper-only conductor wires (rated 90°C) to the Power Distribution Terminal Block in accordance with the schematic shown on the rating plate, as well as the wiring diagram provided. NOTE: For three-phase connections, if any "High Voltage Leg" conductor is present, it **MUST** be mounted to L3 **ONLY.** Replace the cover and fasten securely with removed screws.

SINGLE-PHASE CONNECTION



THREE PHASE CONNECTION



NEMA SPECS.

1620E 1 PHASE	1620E 3 PHASE
6-50P	L15-30P

6. SYSTEM CHECK

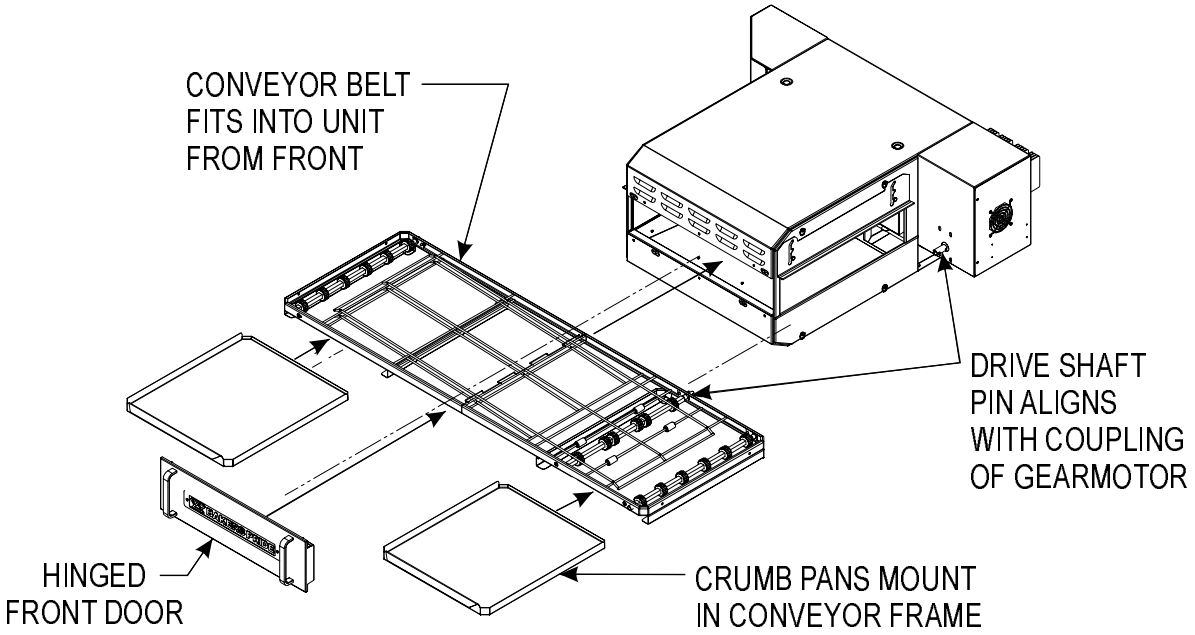
a) Insure that the conveyor belt assembly is installed correctly, with the drive-shaft pin fitting firmly into the coupling that protrudes from the Power Control Box gearmotor output shaft. Visually check that the belt is flat and parallel to the countertop surface. If the belt is not parallel to the countertop, it may be necessary to re-align the gearmotor output shaft to the conveyor belt drive shaft pin. Follow this procedure:

1. **DISCONNECT THE POWER SUPPLY BEFORE SERVICING COMPONENTS INSIDE EITHER OF THE CONTROL BOXES. SERIOUS INJURY, INCLUDING DEATH, MAY OCCUR IF CONTACT IS MADE TO INCOMING POWER.**
2. Re-aligning the coupling / driven-shaft pin requires opening the Power Control Box door.
3. Insert a hex-head nut-driver tool to loosen the (4) screws that fasten the gearmotor to the box side panel.
4. Re-align the coupling to the conveyor belt drive shaft pin. If this is done properly, the driven-shaft pin will fit snuggly into the slot of the gearmotor coupling.
5. When alignment is correct, re-tighten the (4) screws at the gearmotor before closing the door.

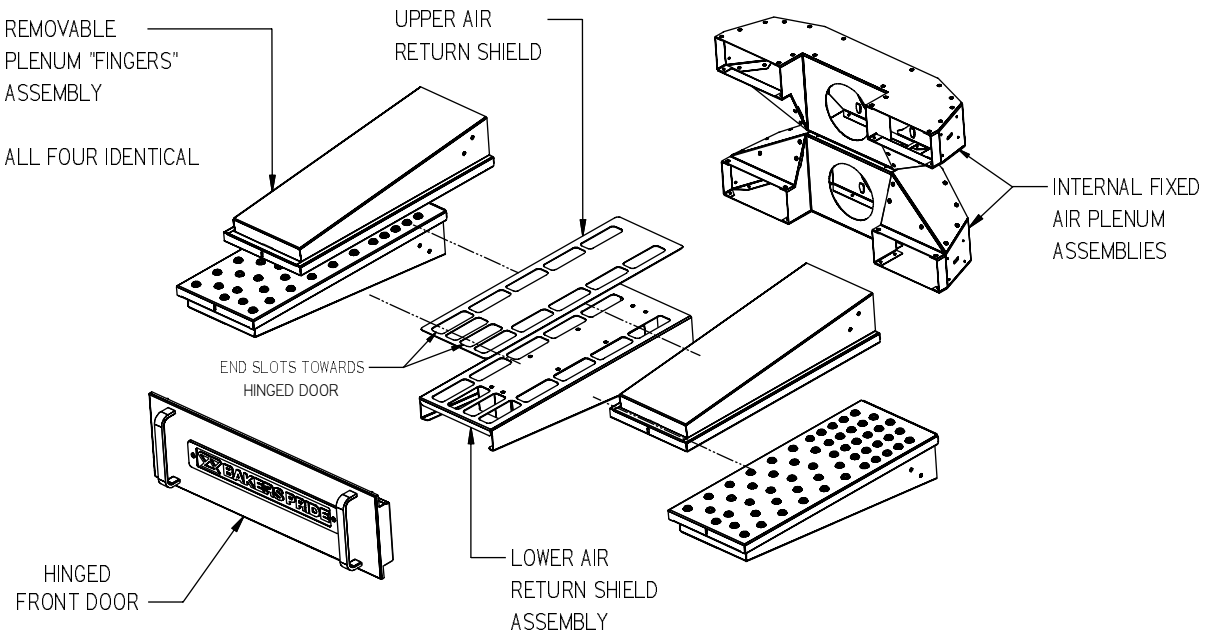
b) The conveyor belt is capable of traveling either Left-to-Right (standard), or Right-to-Left (optional). Direction of travel is determined by looking at the conveyor oven from the front of the unit. Direction of travel is controlled by a "Reversing Switch" that is located inside the control box containing the gearmotor. If the direction of travel needs to be reversed, follow this procedure:

NOTE: CHANGE THE REVERSING SWITCH ONLY WHEN POWER IS DIS-CONNECTED TO THE CONVEYOR OVEN. OTHERWISE, FATAL DAMAGE WILL OCCUR TO THE GEARMOTOR, CAUSING THE CONVEYOR BELT TO STOP MOVING. THE GEARMOTOR WILL NEED TO BE REPLACED DUE TO INTERNAL STRUCTURAL DAMAGE.

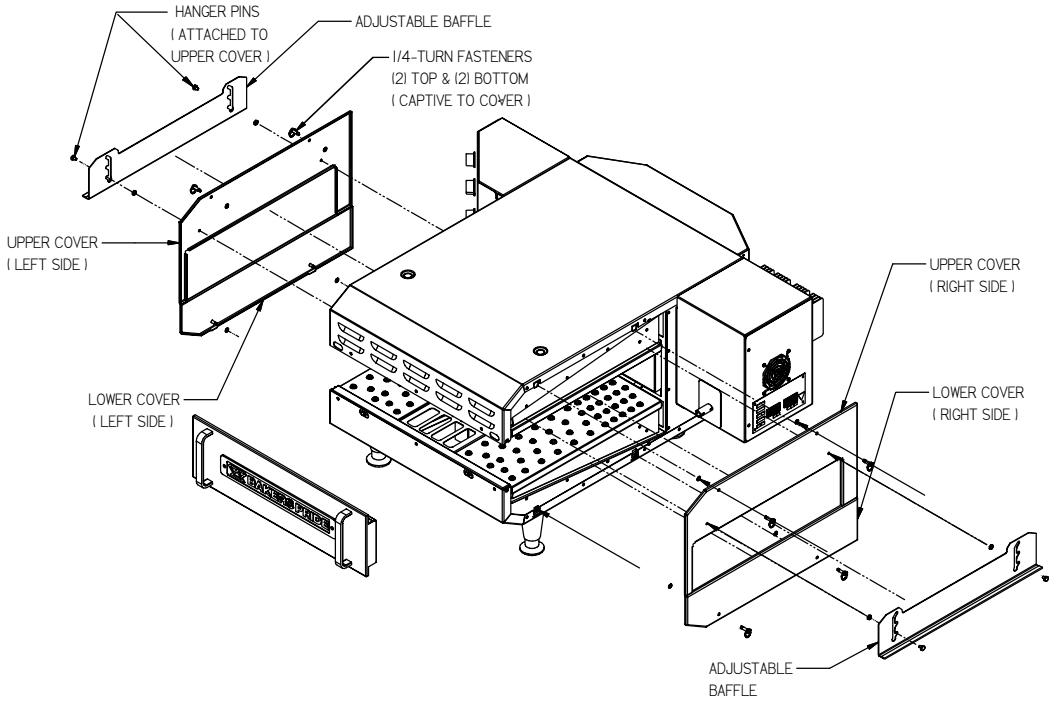
1. **DISCONNECT THE POWER SUPPLY BEFORE SERVICING COMPONENTS INSIDE EITHER OF THE CONTROL BOXES. SERIOUS INJURY, INCLUDING DEATH, MAY OCCUR IF CONTACT IS MADE TO INCOMING POWER.**
2. Reversing the conveyor belt requires opening the Power Control Box door.
3. Locate a small rocker switch mounted just inside the control box, either black or orange in color. Two wires are connected to it.
4. Change the switch position to the opposite setting. No other changes are necessary.
5. Close and securely fasten the door.
6. Re-connect power to the unit.



c) Remove the front door and verify the proper orientation of the upper air return shield. **The plenum fingers are identical, so any finger can be mounted in any location.**

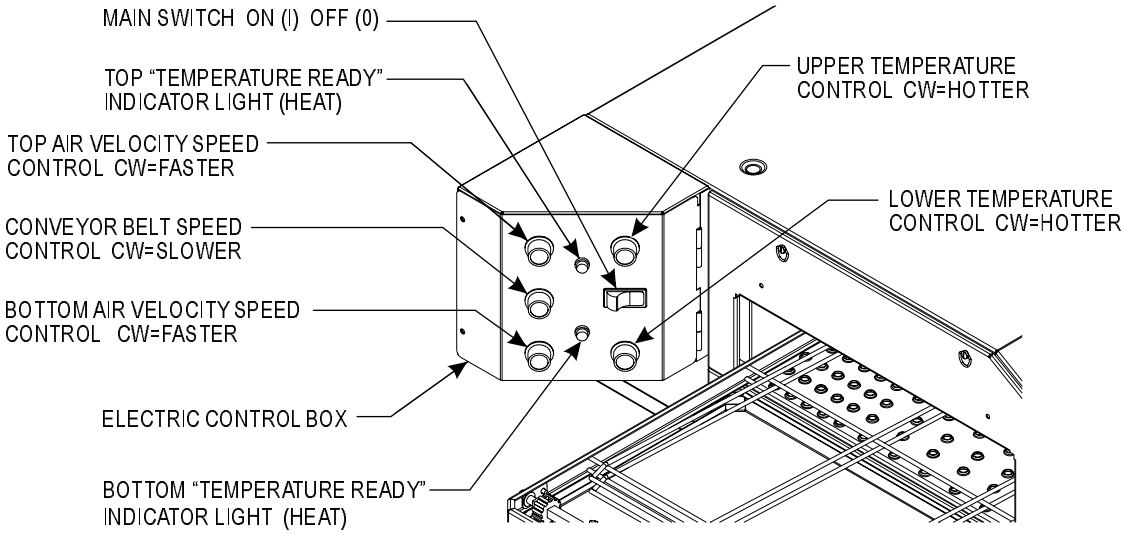


d) Secure the (4) outer side panels to the main frame assembly using the ¼-turn fasteners that are attached to these panels. Mount these side panels AFTER the conveyor has been properly installed. (See above). Adjust the outer baffles UP / DOWN until they are in the correct position to allow product to enter and exit with minimal vertical clearance. This will reduce the amount of heat lost out the sides of the cook chamber.



7. INITIAL STARTUP

a) Focus on the angled Electric Control Box containing the Main Switch (GREEN rocker type, lighted). The VHVA-Series oven is shown, which contains (5) adjustable knobs for blowers, temperature controls, and conveyor belt speed. VH-Series ovens only have (3) adjustable knobs that control temperature and conveyor belt speed. Two indicator lights are mounted to show when HEAT is being added to the system.



1) Flip ON the Main Switch. The switch should light up when ON (I), and be dark when OFF(**O**). Normal warm-up time is 20 -30 minutes for maximum temperature. Lower temperature settings will take less time.

2) **IF THE MAIN SWITCH IS TURNED OFF DURING INITIAL START-UP, LEAVE UNIT OFF FOR AT LEAST 15 SECONDS TO ALLOW THE AIR VELOCITY CONTROLS TO RESET. TOGGLING THE SWITCH RAPIDLY (ON/OFF) WILL STALL THE BLOWER MOTORS AND ALLOW THE HEATERS TO COME ON EVEN THOUGH NO AIR WILL BE MOVING. THIS CAN DAMAGE THE UNIT.**

3) Turn the Air Velocity Speed Controls to MAX (full Clockwise rotation) and listen for the air velocity speed to increase.

4) Set the Temperature Controls to MAX (full Clockwise rotation). The Indicator Lights will illuminate because there is not sufficient heat in the oven. The lights tell you that the heaters are ON.

5) Reduce the blower speed by turning the knob half-way (Counter-clockwise, until indicator mark on the knob is pointing straight UP).

6) Turn the temperature control knobs to 350°F. As each chamber (upper and lower) reach this temperature, the indicator lights will cycle ON and OFF, verifying that the heaters are operating properly in response to heat demand.

7) As you become familiar with the oven, you will set the Top and Bottom Temperature Controls to different settings, according to your cooking requirements. As the oven temperatures vary, the Indicator Lights will turn ON and OFF as the heaters respond to the cooking process.

8) Gradually turn the conveyor belt control Counter-clockwise and verify that the conveyor belt moves faster and faster. Repeat this process, turning the knob Clockwise, verifying that the conveyor belt moves slower.

NOTE: AT SPEED SETTINGS ABOVE "10" (10-minute cook time), IT MAY BE HARD TO TELL THE BELT IS MOVING. PLACE A PAN ON THE BELT TO OBSERVE THAT IT MOVES INTO THE COOK CHAMBER.

8. SHUTDOWN

The conveyor oven is supplied with a special "**COOL-DOWN CIRCUIT**" that helps cool the oven quickly once the unit has been shut OFF. This feature performs the following functions when the Main Switch is turned OFF at the end of the day:

a) The blowers keep running to re-circulate air through the air chambers
b) The heaters shut OFF.
c) The conveyor belt stops moving.
d) Once the oven has cooled down to a factory pre-set temperature, the blowers shut OFF. The oven is now completely OFF. ***NOTE: This pre-set temperature is not adjustable.***

NOTE: TO ACCELERATE THE COOLING OF THE OVEN, OPEN THE FRONT DOOR TO ALLOW COOLER AIR INTO THE SYSTEM.

NOTE: IF THE MAIN SWITCH IS TURNED BACK ON WHILE THE UNIT IS COOLING DOWN, THE HEATERS AND CONVEYOR BELT WILL RE-ENGAGE TO BEGIN STANDARD COOKING OPERATION. THIS IS NORMAL AND WILL NOT DAMAGE THE OVEN. HOWEVER, THE UNIT WILL NEVER GET HOT ENOUGH TO COOK IF THE FRONT DOOR IS OPEN.

9. SPECIAL FEATURES

Your new conveyor oven has been built with numerous enhancements to add flexibility and simplicity to your cooking operation. The conveyor ovens are built in two versions:

VARIABLE HEAT/VARIABLE AIR

VARIABLE HEAT/FIXED AIR

The following special features ARE FOUND IN BOTH VERSIONS:

A. INDEPENDENT TOP AND BOTTOM HEAT. Different temperature settings can be set for both top and bottom heat zones.

B. VARIABLE-SPEED CONVEYOR BELT

C. FIELD-REVERSIBLE CONVEYOR BELT TRAVEL

D. FRONT-REMOVABLE CONVEYOR BELT. No need to slide the belt assembly out the side.

E. INDEPENDENT TOP AND BOTTOM OUTER SIDE COVERS. Makes it possible to remove conveyor belt from the front.

F. SYMMETRICAL OUTER COVERS (DUAL AIR 1828E ONLY). Top and bottom outer side covers can mount on either side.

G. EASE IN CLEANING. This is accomplished by easily removable components for access to the cook chamber, air plenum "fingers", and conveyor belt assembly.

The **VARIABLE HEAT/VARIABLE AIR** unit has this additional feature.

VARIABLE-SPEED TOP AND BOTTOM AIR VELOCITY. This allows for maximum flexibility in controlling the cooking environment, as some food products require less top air than others.

10. CLEANING

CAUTION: THE CONVEYOR OVEN CONTAINS ELECTRICAL COMPONENTS. TURN OFF THE OVEN AND DISCONNECT THE POWER BEFORE CLEANING BEGINS.

DO NOT CLEAN THE CONVEYOR OVEN WITH A WATER JET. Use only a damp cloth.

WEEKLY CLEANING:
1. Remove crumb pans. Remove conveyor belt assembly.
2. Remove plenum "finger" assemblies and disassemble for cleaning.

Oven Exterior: CLEAN ONLY WHEN THE OVEN IS COLD. Standard construction of the exterior is of stainless steel.

Deposits of baked-on splatter and grease, or discoloration may be removed by using any commercial cleaner recommended for stainless steel. Always rub with the grains and apply very light pressure. **Rinse with a MOIST, NOT SOAKING, cloth.**

Oven Interior: CLEAN ONLY WHEN THE OVEN IS COLD. Standard construction of the interior (cook chamber) is of aluminized steel, and requires care not to "over-clean" and scratch the surface.

CAUTION: DO NOT USE OVEN CLEANERS, CAUSTIC SOLUTIONS OR MECHANICAL MEANS BECAUSE THESE WILL DAMAGE THE ALUMINIZED SURFACES. Use only the detergent solutions and cleaners that meet national and/or local codes. Clean the walls of the cook chamber with a mild soap and water solution.

To clean the interior of the conveyor oven, it is necessary to remove the front door, the (4) outer sides panels, the conveyor belt assembly, and the (4) air plenum "fingers". (See page 9.)

Conveyor Belt Assembly

1. CONVEYOR BELT STILL MOUNTED IN OVEN:

   NOTE: USE CARE IF CLEANING THE CONVEYOR BELT WHILE IT IS STILL MOUNTED IN THE OVEN. EXCESSIVE FORCE MAY PRODUCE AN OVERLOAD CONDITION THAT COULD DAMAGE THE GEARMOTOR AND CAUSE THE OVEN TO BE RENDERED UN-USABLE.

   Using a plastic abrasive pad, wipe the conveyor belt in a back-and-forth motion to remove baked-on product. Wipe clean with a hot, damp cloth.

2. CONVEYOR BELT REMOVED FROM OVEN:

   Using a plastic abrasive pad, wipe the conveyor belt in a back-and-forth motion to remove baked-on product. Wipe clean with a hot, damp cloth.

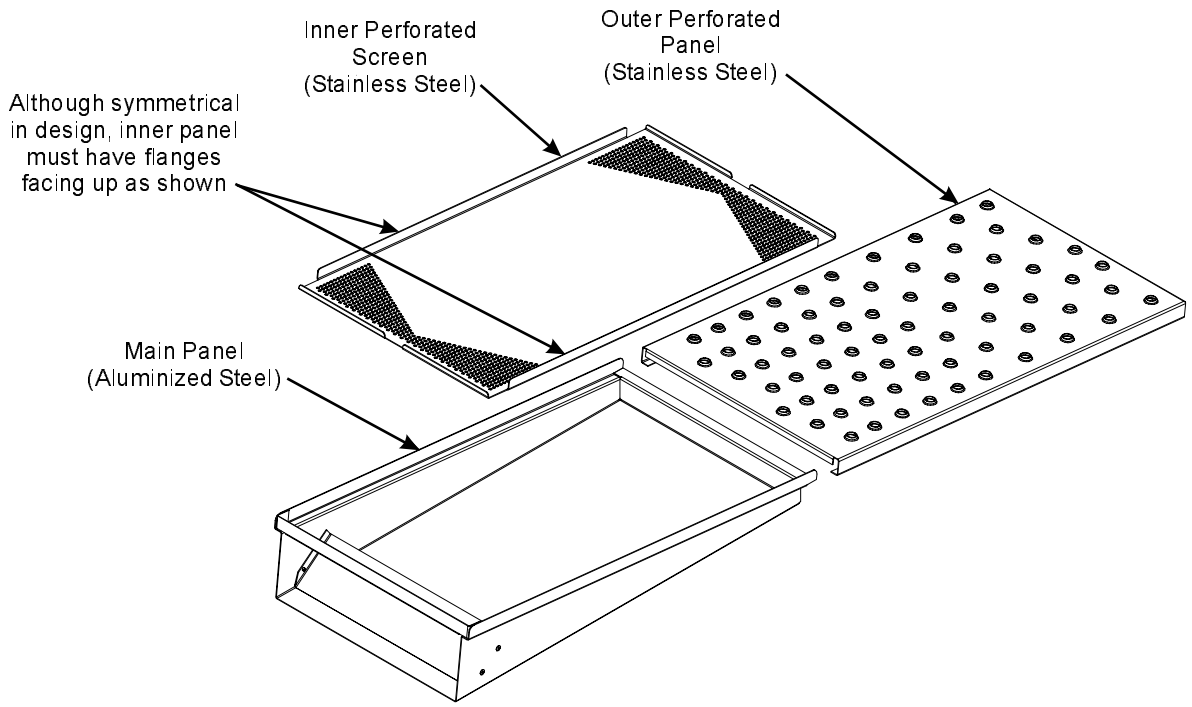
   NOTE: IT IS NOT NECESSARY TO REMOVE THE BELT FROM THE FRAME ASSEMBLY FOR CLEANING.

3. Check the belt links for any sign of damage. If any links are bent, use a needle-nose pliers to repair prior to re-installation into the unit.

Plenum "Fingers"

The conveyor oven contains (4) plenum "fingers" that direct air onto the product surface while cooking. This 3-piece assembly comes apart for cleaning, as shown below:

AIR PLENUM "FINGER ASSEMBLY"



The Outer Perforated panel is locked into place through a friction fit to the Main panel. This method of fastening also captures the Inner panel, holding it in place. The Outer panel slides off the Main panel, exposing the perforated Inner panel. The Inner panel is symmetrical in design, and may be placed in either direction, as long as the outer flanges are pointing **UPWARD** as shown in the figure above.

The Inner and Outer panels are made of stainless steel, and therefore may be exposed to strong cleaners to remove baked-on grease, etc. Overnight soaking in a hot cleaning solution will improve the cleaning process.

The Main panel is made of aluminized steel like the main cook chamber, and thus requires the same level of care to retain its integrity. Follow the same precautions as mentioned above for the main cook chamber.

11. OPERATOR MAINTENANCE

WARNING DANGER: DISCONNECT THE POWER SUPPLY BEFORE SERVICING OR CLEANING THE OVEN. SERIOUS INJURY, INCLUDING DEATH, MAY OCCUR IF CONTACT IS MADE WITH INCOMING POWER.

During normal operation of the oven, lubrication is not required.

To achieve maximum efficiency, keep the oven clean. How you maintain your oven will determine how long it lasts.

If the oven fails to operate, perform the following inspections BEFORE calling an authorized service agent:

1. Check to see if the main circuit breaker is ON at the breaker panel.

2. Check the (2) 5-amp fuses located in the bottom of the Power Control Box. **CAUTION: IF FUSES ARE BAD, REPLACE ONLY WITH IDENTICAL FUSES. DO NOT SUBSTITUTE HIGHER VALUE FUSES, AS THIS MAY NULLIFY NEEDED PROTECTION FOR THE INTERNAL ELECTRICAL COMPONENTS.**

3. Check that the Main Switch is ON. If operating properly, the rocker switch will be lighted when ON.

4. Check the setting of the temperature control thermostats (knobs). If operating properly, they will activate the amber indicator lights as you turn the knobs back and forth, calling for heat. It is very unlikely that the light will burn out.

5. If there is no air blowing, check the following:

   i. **DUAL AIR MODEL VHVA-SERIES**: **RESET** the unit by turning the Main Switch OFF for at east15 seconds and then turning it back ON. This resets the blower speed controls. If this is not successful, turn off the wall circuit breaker for one minute and then turn it on again.

   ii. **DUAL AIR MODEL VH-SERIES**: Observing the **WARNING** at the beginning of this section, open the Power Control Box and locate the overload relay (above gearmotor). **PUSH IN THE "RESET" BUTTON**. Try the Main Switch again.

      1. NOTE: **The Overload Relay is both a current limiting and a thermal device**, meaning that if one or both of the blower motors get jammed, the overload relay shuts the motor(s) OFF if there is excessive current going to the motor(s), or if excessive heat builds up in the overload relay due to an overload condition. Because it takes time for the relay to cool down, do not assume that there is another problem IF pushing the RESET button doesn't accomplish the task Both settings, **RESET button pushed IN & overload not overheated**, must be correct for proper operation.

6. If the conveyor belt does not move, check to see that the coupling setscrew is tight on the gearmotor output shaft.

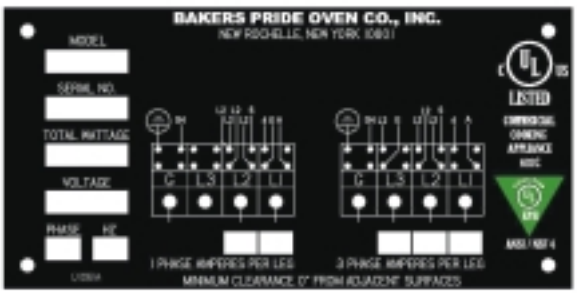
If the oven still does not operate, turn OFF the Main Switch and disconnect the power supply to the unit (if possible). Contact the factory, factory representative, or an authorized service agency.

ALL SERVICING SHOULD BE PERFORMED ONLY BY A FACTORY AUTHORIZED SERVICE TECHNICIAN OR AGENT.

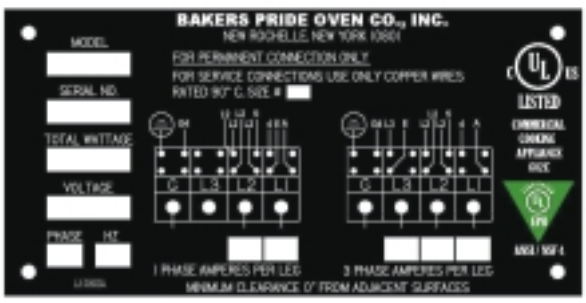
12. RATING PLATE

A copy of the rating plate is shown here for reference.

MODEL VH-SERIES



MODEL VHVA-SERIES



13. CONVEYOR REMOVAL

Extensive Engineering went into designing your oven for ease of cleaning. One SPECIAL FEATURE is the ability to remove the conveyor belt assembly straight out the font of the oven. Follow this procedure, using the diagram provided: (See drawing below)

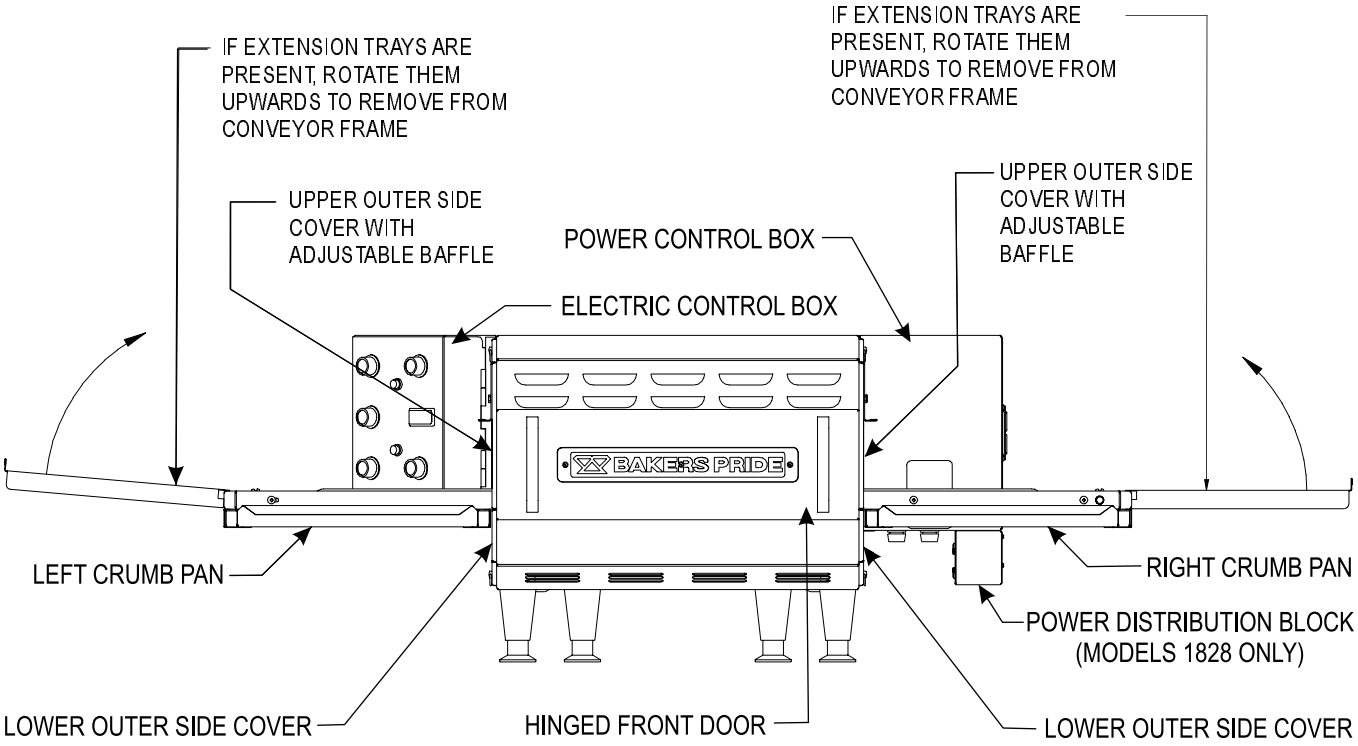
a) Remove any extension trays present, rotating them upwards to clear the conveyor frame. Flanges on the trays hook around the ends of the frame.
b) Remove the two crumb pans.
c) Remove the upper outer side covers, which have the adjustable baffles attached with pins. The covers are held in place with hand-twist fasteners. Turn these fasteners 90° counterclockwise to loosen, and 90° clockwise to tighten.
d) It is not necessary to remove the outer lower side covers.

NOTE: On Dual Air Models VH-, VHVA1828E Series ovens, the outer upper and lower covers are symmetrical, and can be mounted on either side of the oven.

e) Open the front hinged door.
f) Carefully supporting both right and left sides of the conveyor, lift the front edge slightly and pull towards you, watching as the drive shaft pulls out of the gearmotor coupling.

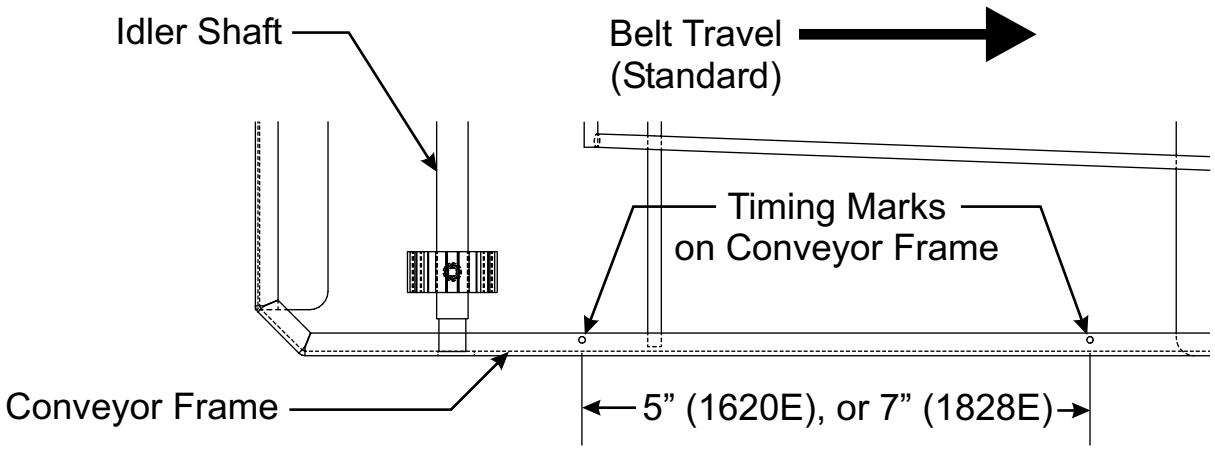
14. CONVEYOR INSTALLATION

Installing the conveyor belt assembly is done in exact reverse order to it's removal. The MOST IMPORTANT POINT is to properly align the drive shaft pin with the gearmotor coupling. If the drive shaft pin must be wedged into place for installation, the coupling location needs to be adjusted. See Section 6a for this procedure. **DO NOT FORCE THE DRIVE PIN INTO THE COUPLING IF THEY DO NOT ALIGN.**



15. CONVEYOR BELT SPEED CALIBRATION

The conveyor belt requires calibration to properly align the speed control knob on the Electric Control Box. Calibration is done by timing the belt as it passes between two timing marks located on the conveyor frame. This method will work regardless of belt travel direction. Follow the instructions below.



A. Remove the adjustment knob of the conveyor belt speed control (see page 10) using a small, standard screwdriver to loosen the setscrew.

B. Locate the two timing marks as shown above. For the Dual Air VH-, VHVA1620E series, the marks are 5 inches apart; for the Dual Air VH-, VHVA1828E the marks are 7 inches apart. IF the timing marks are NOT present, use a black marking pen to mark the frame in the same manner.

C. These distances represent exactly ¼ of the distance of the cook chamber: ¼ x 20" cook chamber (Dual Air 1620E) = 5"; ¼ x 28" cook chamber (Dual Air 1828E) = 7".

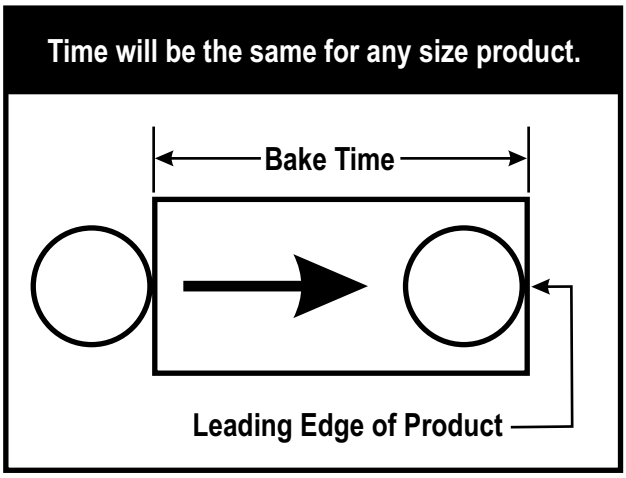
D. With this 1:4 ratio, it is possible to calibrate the belt speed. For example:
   1. For a cook time of 1 minute, the time required to pass between timing marks would be: 60 seconds / 4 = 15 seconds. If the belt passes from one mark to the next in 15 seconds, this is exactly the same as a 1-minute cook time.
   2. For a cook time of 6 minutes, the required time to pass between timing marks would be: 6 minutes x 60 seconds / 4. This equals 360 seconds / 4 = 90 seconds between marks. The belt needs to take 90 seconds (1-1/2 minutes) to move from one mark to the next to equal a 6-minute cook time.

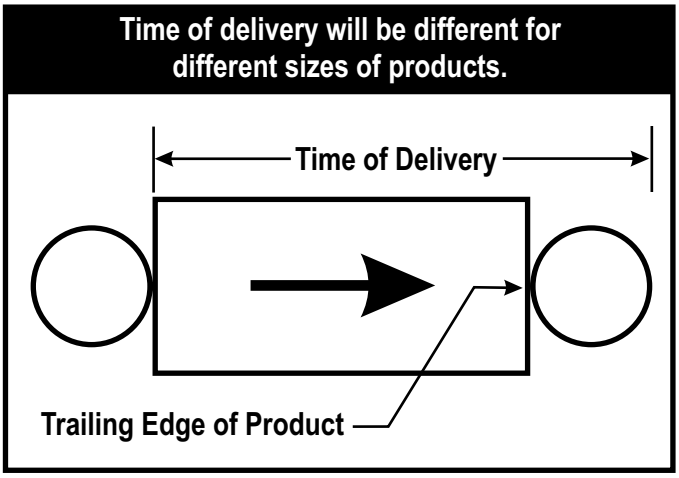
E. Using a black marking pen, mark any belt link near the outer edge. Using a stopwatch, check the time it takes for this link to move between the timing marks. Repeat this procedure several times until the distance is traveled in 90 seconds (recommended calibration interval), which equals a 6-minute cook time.

F. Now that the belt is moving at this calibrated speed, CAREFULLY re-mount the adjustment knob onto the belt conveyor speed control shaft, and tighten the setscrew so that the KNOB indicating mark is pointing at the number "6" on the surrounding label.

G. The conveyor belt is now calibrated for ALL ranges as indicated on the label. The label numbers are COOK TIME in MINUTES. Simply point the knob indicating line to the desired cook time.
NOTE: The label COOK TIME marks are close approximates, and may vary slightly from actual timing results using the method described.

H Cook/Bake Time is not the same as time of delivery. **Time of Delivery** is the actual time required for the first item, leading edge to trailing edge. **Cook/Bake Time** is leading edge to leading edge. For example, the **Time of Delivery** for a 16" pizza with a 6 minute **Bake/Cook Time** (using the Dual Air 1828 conveyor) is 9.4 minutes.





Time of Delivery (TOD) = $\frac{\text{Bake Time}}{\text{Bake Chamber Length}}$ X (Bake Chamber Length + Product Diameter)

Example 1:
Bakers Pride **Dual Air Model 1620**, 6 Minute Bake Time, 16" pizza (time required for the 1st item):

(TOD) = $\frac{\text{6 Minutes}}{\text{20"}}$ X (20 + 16) = 10.8 Minutes

Example 2:
Bakers Pride **Dual Air Model 1828**, 6 Minute Bake Time, 16" pizza (time required for the 1st item):

(TOD) = $\frac{\text{6 Minutes}}{\text{28"}}$ X (28 + 16) = 9.4 Minutes

I. To calculate production capacity per conveyor, per hour use the following formula.

Oven Capacity/Hour (OCH) = $\frac{\text{Bake Chamber Length X Bake Chamber Depth}}{\text{Product Diameter}^2}$ X $\frac{\text{60 Min/Hr}}{\text{Bake Time}}$

Example 1:
Bakers Pride **Dual Air Model 1620**, 6 Minute Pizza, 16" Pizza

OCH = $\frac{(20 \text{ X } 16)}{16^2}$ X $\frac{60}{6}$ = 12.5

Example 2:
Bakers Pride **Dual Air Model 1828**, 6 Minute Pizza, 16" Pizza

OCH = $\frac{(28 \text{ X } 18)}{16^2}$ X $\frac{60}{6}$ = 19.7

16. TROUBLESHOOTING GUIDE

THE PROBLEM	THE CAUSE	THE SOLUTION
Oven doesn't start	Blown fuse(s)	Replace fuse with identical type - 5 amp
	Main Switch OFF	Turn ON
	Main Switch broken	Replace
	Main circuit breaker OFF	Turn ON
	Power cord disconnected (1620E only)	Plug cord in (1620E only)
	Power connections broken	Check power distribution terminal block below Power Control Box
Conveyor belt doesn't move, or it moves unevenly. Unexpected speed changes.	Conveyor belt running backwards	**CAUTION: TURN OFF POWER**, open Power Control Box, and flip Reversing Switch to opposite position.
	Belt loose. Drive sprockets not engaging belt links.	Tighten conveyor belt using adjustable tensioner at one end of belt frame.
		Verify that all sprockets are tight and properly aligned with belt "segments".
		If belt still too loose, remove one belt link.
	Belt master link(s) missing, broken, or installed incorrectly.	Install master link(s) properly
	Conveyor belt installed backwards or upside down	Proper belt orientation is for outer belt loops to be facing in oppositie direction of travel, and the outer loops to be on top of the trailing link.
	Speed setting very high (long cook time)	Adjust speed to FAST to verify if knob is tight and potentiometer working correctly
	Speed knob loose	Tighten setscrew in knob on pot shaft. **NOTE:** Mark on knob should line up with mark on label to indicate cook time in minutes. This may require calibration of belt movement using timing marks on conveyor frame. **For CALIBRATION, see Section 15.**
	Conveyor drive shaft not engaged to coupling	Align and engage shaft pin to slot in drive coupling
	Drive coupling loose	Tighten setscrew to gearmotor output shaft (shaft is "flatted" for setscrew grip)
	Drive coupling missing	Properly re-attach and tighten to gearmotor output shaft
	Conveyor belt jammed	Remove belt assembly to identify obstruction to belt movement. Remedy problem. Straighten bent belt links
	Drive shaft pin missing	Locate and re-install or replace
	Drive sprockets worn out, missing, or mis-aligned	Replace sprockets or entire drive shaft assembly. Tighten sprockets to shaft.
	Conveyor gearmotor failed	**CAUTION: THE FOLLOWING TESTS ARE PERFORMED WITH LIVE POWER WITH CONTROL BOX OPEN. THESE TESTS TO BE PERFORMED ONLY BY AN AUTHORIZED SERVICE AGENT.** 1. Test by disconnecting conveyor belt. If no shaft rotation or motor noise when power applied, test power supply. 2. Test power supply input connections @ terminal block (85-265 VAC). 3. Remove cover from power supply enclosure and verify integrity of internal connections (Molex pin connectors).

THE PROBLEM	THE CAUSE	THE SOLUTION
Conveyor belt doesn't move, or it moves unevenly. Unexpected speed changes. (Continued)	Conveyor gearmotor failed (Continued)	4. Verify wire connectors from power supply to gearmotor (2 wires w/connectors). If power supply doesn't give 24 VDC output, replace it. 5. Verify potentiomter connections to gearmotor (3 wires w/connectors). If speed doesn't change when knob is turned, test with spare pot before replacing original pot.
		If all previous tests verify power and control to gearmotor, replace gearmotor.
No air or not enough air coming from blower(s)	Blower motor(s) "stalled" (not running when Main Switch ON)	Turn Main Switch OFF for at least 15 seconds, then turn it ON again. This resets speed controls. If this doesn't help, turn OFF Main Circuit Breaker for **1 Minute**, then turn it ON again.
	Blower motor(s) "jammed"	Remove source(s) of obstruction. **CAUTION: TURN OFF MAIN CIRCUIT BREAKER BEFORE REACHING INTO BLOWER WHEEL COMPARTMENT. SERIOUS INJURY COULD RESULT OTHERWISE!!**
	Blower speed control(s) at minimum or low-speed setting (model VHVA-Series only)	Turn speed knob(s) clockwise to increase air flow
	No sound or noise coming from blower(s)	Turn both blower speed controls to minimum, then adjust each one separately to hear for sound changes which indicate air movement. (model VHVA-Series only)
	Blower(s) turning backwards. (Applies to models VH-, VHVA Three-phase units, and VHVA Single-phase units. Does NOT apply to VH Single-phase units.)	Verify correct rotation - counterclockwise when standing in front of machine. Remove the front door, the conveyor belt assembly, and both upper and lower air return shilelds. Turn the Main Switch ON and OFF one time to start the blowers, and observe the rotation as the blowers slow down to stop. If rotation is incorrect, (three-phase motors only), then two of the three power wires need to be swapped **@ the terminal block** to reverse direction of rotation. Re-check with same method.

THE PROBLEM	THE CAUSE	THE SOLUTION
No air or not enough air coming from blower(s) (Continued)	Wire connections broken or loose between speed controls and blower motor(s) (model VHVA-Series only)	**CAUTION: THE FOLLOWING TESTS 1-4 ARE PERFORMED WITH LIVE POWER WITH CONTROL BOX OPEN, OR REAR MOTOR COVER REMOVED. THESE TESTS TO BE PERFORMED ONLY BY AN AUTHORIZED SERVICE AGENT.** 1. Speed control wire connections are labeled U, V, and W. Insure connectors are tight. 2. Insure these (3) wires are tight on terminal block located in blower motor compartment. 3. Tighten wires from pot to speed control at the header terminal on speed control board. 4. One pot wire contains a 15K ohm resistor at the pot body. Verify this solder connection is good.
	Wire connections broken or loose between blower motor(s) and terminal block.	
	Wire connections broken or loose between potentiometer and speed control	
	Blower speed control(s) failed	5. Blower(s) can stop if speed controls have not been reset (model VHVA-Series only). If yellow "FAULT" light on speed control circuit board is ON, first turn OFF main Switch for 15 seconds to rest control(s). If yellow "FAULT" light remains ON, disconnect main power cord or circuit breaker for **1 minute**. If "FAULT" light persists, and all previous tests show normal, speed control can be tested in the following manner: swap motor wires from "good" speed control to "bad" control, and see if blower motor works. If YES, then "FAULTY" control is bad and needs replacing. If NO, then "FAULTY" control is OK, and motor may need replacing. 6. Test potentiometer by swapping "bad" pot to "good" speed control. If motor then works properly, pot is OK, and other speed control needs testing. (model VHVA-Series only).
	Blower motor(s) failed	7. If all previous tests are normal, then blower motor has failed. Replace.

THE PROBLEM	THE CAUSE	THE SOLUTION
Oven not hot enough	Temperature setting too low	Turn temperature control knob to right (clockwise)
	Cooking too soon	Oven takes 30-40 minutes to get up to stabilized operating temperature.
	Temperature control not working properly	Turn temperature knobs back and forth. Do both lights go ON & OFF? If YES, then temperature controls are OK. If NO, then malfunctioning light indicates which control needs further investigation. Use the following steps to check.
		CAUTION: THE FOLLOWING TESTS ARE PERFORMED WITH LIVE POWER WITH CONTROL BOX OPEN. THESE TESTS TO BE PERFORMED ONLY BY AN AUTHORIZED SERVICE AGENT. 1. Locate the two temperature contols mounted on the hinged door, near the cooling fan. Verify that ALL connections and connectors are properly fastened and tight. Power should be connected to terminals labeled 240 & VAC COM. 2. Locate the two wires from each of the temperature sensors (top left terminals labeled PROBE). These have braided insulation. Verify their integrity. 3. If necessary to test, disconnect one sensor at a time, and use voltmeter to measure resistance at sensor wires. Compare to resistance chart in back of this manual. If sensors show INFINITE resistance, sensor is bad. Replace. 4. If resistance reads value within range of chart, sensor is good, control needs further investigation. Re-connect sensor wire leads. (See diagram at back of manual for proper identification of controls).
		NOTE: temperature sensor lead wires are NOT polarity sensitive, since sensor is an RTD-type.
		5. If both sensors are good, swap sensor leads between controls. Turn temperature knobs ON & OFF. Whichever light works properly, the **OPPOSITE** control is bad. Replace.

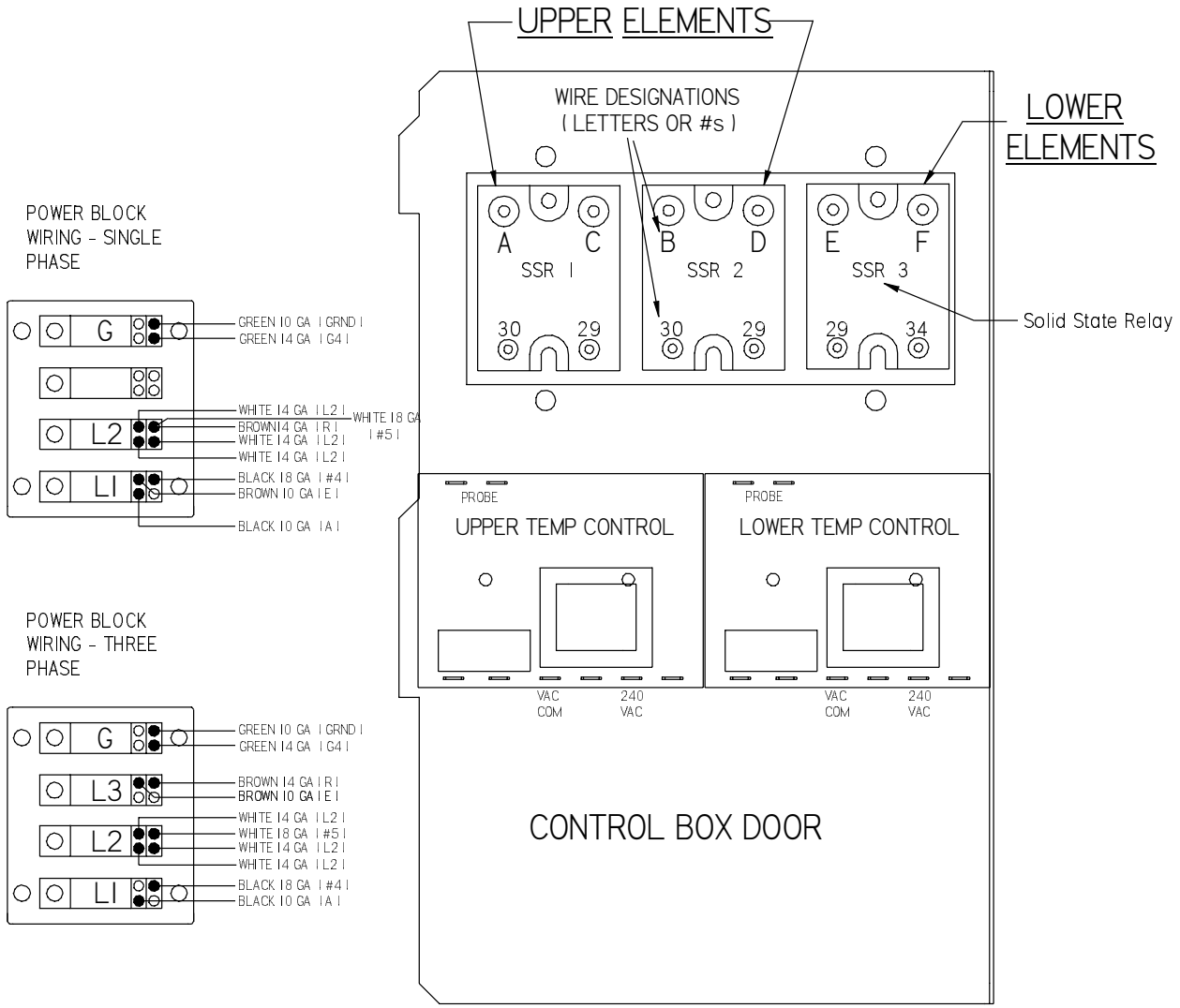
Notes:

17. TEMPERATURE CONTROL CONVERSION CHART

The temperature sensor (probe) that is supplied with this conveyor oven is an RTD type, which yields an output based on Ohms of resistance. This particular RTD device has a linear resistance curve that produces a very predictable amount of resistance that can be converted to degrees Fahrenheit. This particular device produces a resistance increase of 2 Ohms per every 1 degree F. The baseline value is approx. 1000 ohms at 32 °F (0°C).

Ohms	°F	Ohms	°F	Ohms	°F
1002	32	1358	204	1714	380
1004	34	1370	210	1722	384
1017	40	1379	214	1734	390
1025	44	1391	220	1742	394
1038	50	1399	224	1753	400
1046	54	1411	230	1761	404
1059	60	1420	234	1773	410
1067	64	1432	240	1781	414
1080	70	1440	244	1793	420
1088	74	1452	250	1801	424
1101	80	1460	254	1813	430
1109	84	1473	260	1821	434
1122	90	1481	264	1832	440
1130	94	1493	270	1844	446
1143	100	1501	274	1852	450
1151	104	1513	280	1860	454
1164	110	1521	284	1872	460
1172	114	1533	290	1879	464
1184	120	1541	294	1891	470
1193	124	1554	300	1899	474
1205	130	1562	304	1911	480
1214	134	1574	310	1918	484
1226	140	1582	314	1930	490
1234	144	1594	320	1938	494
1247	150	1602	324	1950	500
1255	154	1614	330	1957	504
1267	160	1622	334	1969	510
1276	164	1634	340	1977	514
1288	170	1642	344	1988	520
1286	174	1654	350	1996	524
1309	180	1662	354	2008	530
1317	184	1674	360	2027	540
1329	190	1682	364	2035	544
1338	194	1694	370	2046	550
1350	200	1702	374		

18. Solid State Relay Labeling I.D. - Models VH-, VHVA1620E Conveyor Ovens



RESISTANCE VALUES OF VARIOUS CIRCUITS

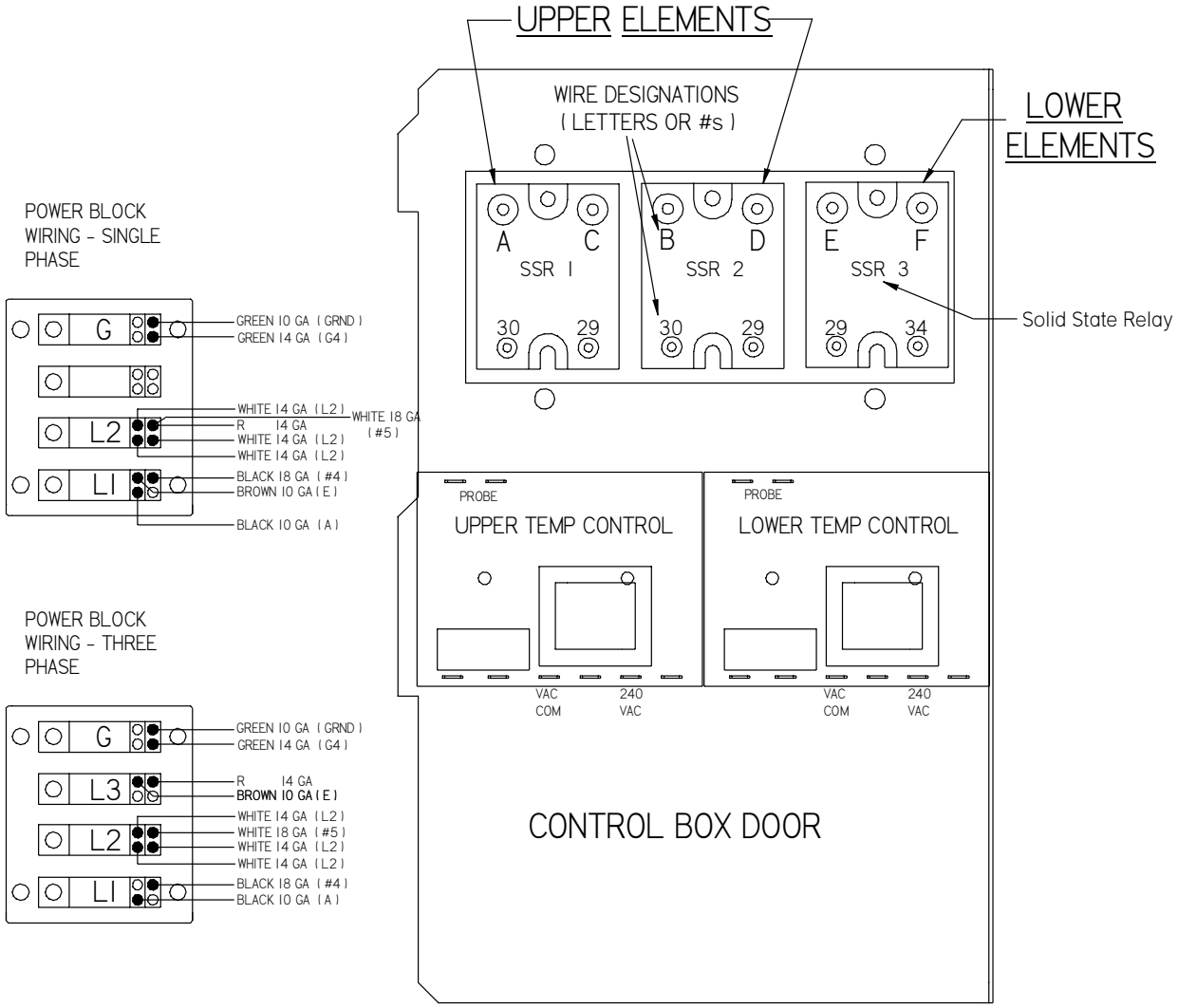
Dual Air Models: VH-, VHVA1620E Conveyor Ovens

NOTE: Fuses removed; (4) elements @ 1.5kw = 6.0kw; Ohms = Volts x Volts / Watts

Single Phase Units		
Circuit Leads	**208 Volt**	**240 Volt**
Between C & L2	28.3 Ohms	38.9 Ohms
Between D & L2	28.3 Ohms	38.9 Ohms
Between C & D	56.2 Ohms	77.6 Ohms
Between C & F	42.5 Ohms	58.1 Ohms
Between D & F	42.3 Ohms	58.1 Ohms
Between F & L2	14.5 Ohms	19.5 Ohms

Three Phase Units		
Circuit Leads	**208 Volt**	**240 Volt**
Between C & L3	28.3 Ohms	38.9 Ohms
Between D & L2	28.3 Ohms	38.9 Ohms
Between C & D	1.2M Ohms	1.3M Ohms
Between C & F	1.2M Ohms	1.3M Ohms
Between D & F	42.3 Ohms	58.1 Ohms
Between F & L2	14.5 Ohms	19.5 Ohms

Solid State Relay Labeling I.D. - Models VH-, VHVA1828E Conveyor Ovens



RESISTANCE VALUES OF VARIOUS CIRCUITS

Dual Air Models: VH, VHVA1828E Conveyor Ovens

NOTE: Fuses removed; (4) elements @ 3kw = 12kw; Ohms = Volts x Volts / Watts

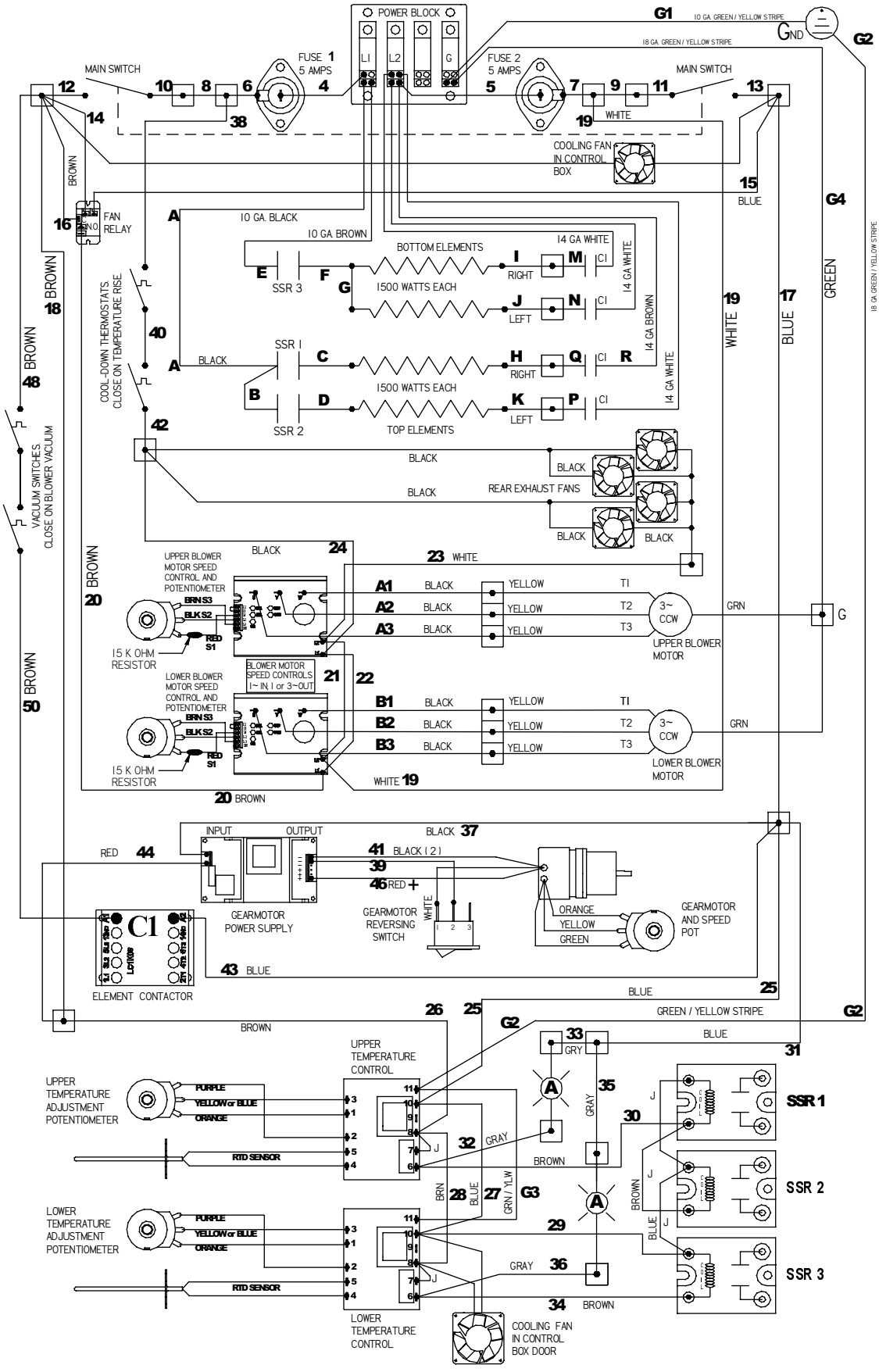
Single Phase Units		
Circuit Leads	**208 Volt**	**240 Volt**
Between C & L2	14.3 Ohms	18.2 Ohms
Between D & L2	14.3 Ohms	18.2 Ohms
Between C & D	28.5 Ohms	36.2 Ohms
Between C & F	21.4 Ohms	27.3 Ohms
Between D & F	21.4 Ohms	27.2 Ohms
Between F & L2	7.3 Ohms	9.3 Ohms

Three Phase Units		
Circuit Leads	**208 Volt**	**240 Volt**
Between C & L3	14.5 Ohms	18.2 Ohms
Between D & L2	14.3 Ohms	18.2 Ohms
Between C & D	4.7M Ohms	3.4M Ohms
Between C & F	4.7M Ohms	3.4M Ohms
Between D & F	21.4 Ohms	27.2 Ohms
Between F & L2	7.2 Ohms	9.4 Ohms

Element Resistance Chart - VH-,VHVA-Series Conveyor Oven				
MODEL	ELEMENT WATTAGE	208 VOLTS	220 VOLTS	240 VOLTS
VH-,VHVHA1620E	1500	28.8 ohms	32.3 ohms	38.4 ohms
VH-,VHVHA1828E	3000	14.4 ohms	16.1 ohms	19.2 ohms

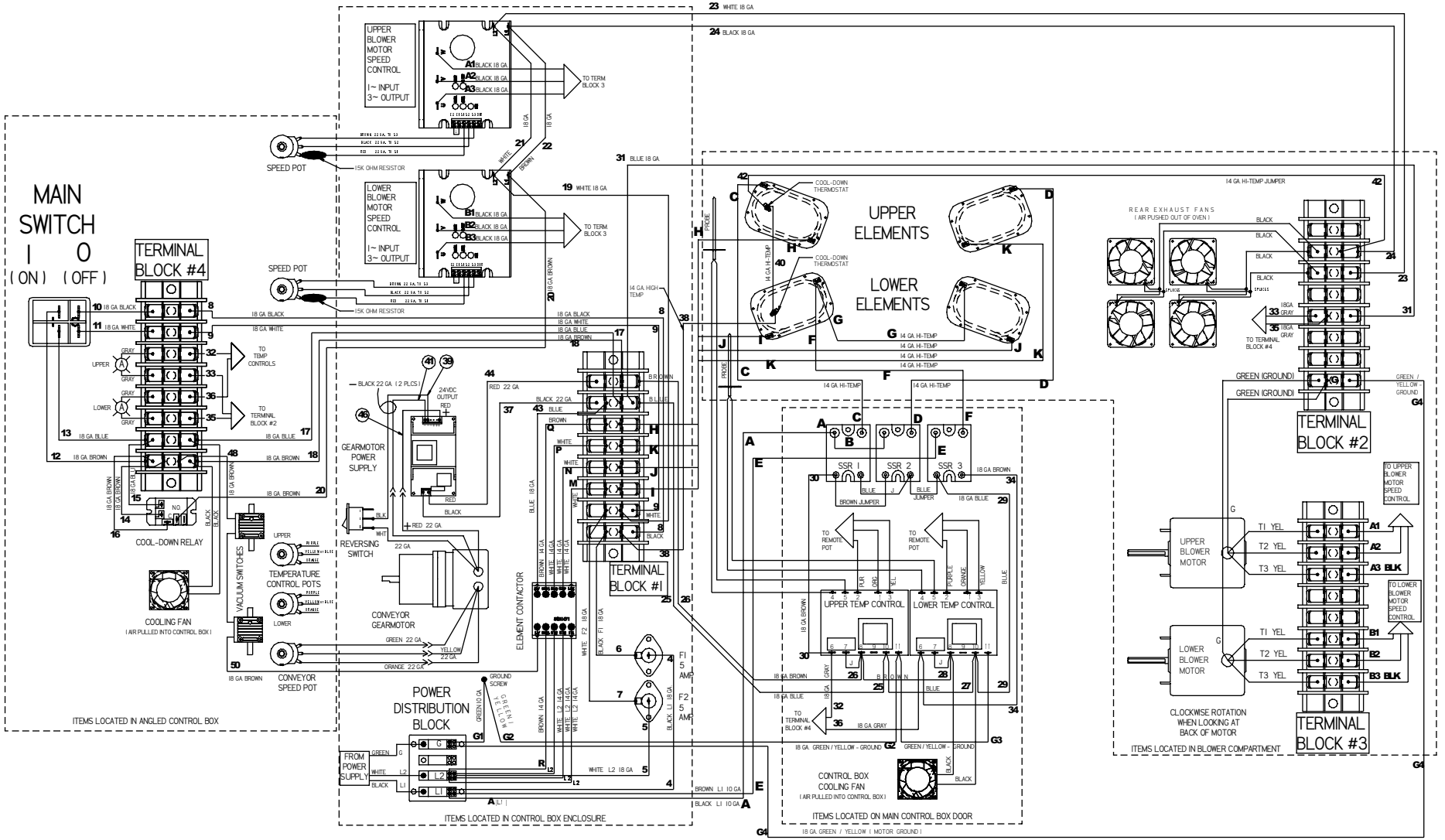
19. ELECTRICAL SCHEMATICS & WIRING DIAGRAMS

VHVA1620E Schematic 208, 220 or 240VAC, 50/60Hz, 1 Phase



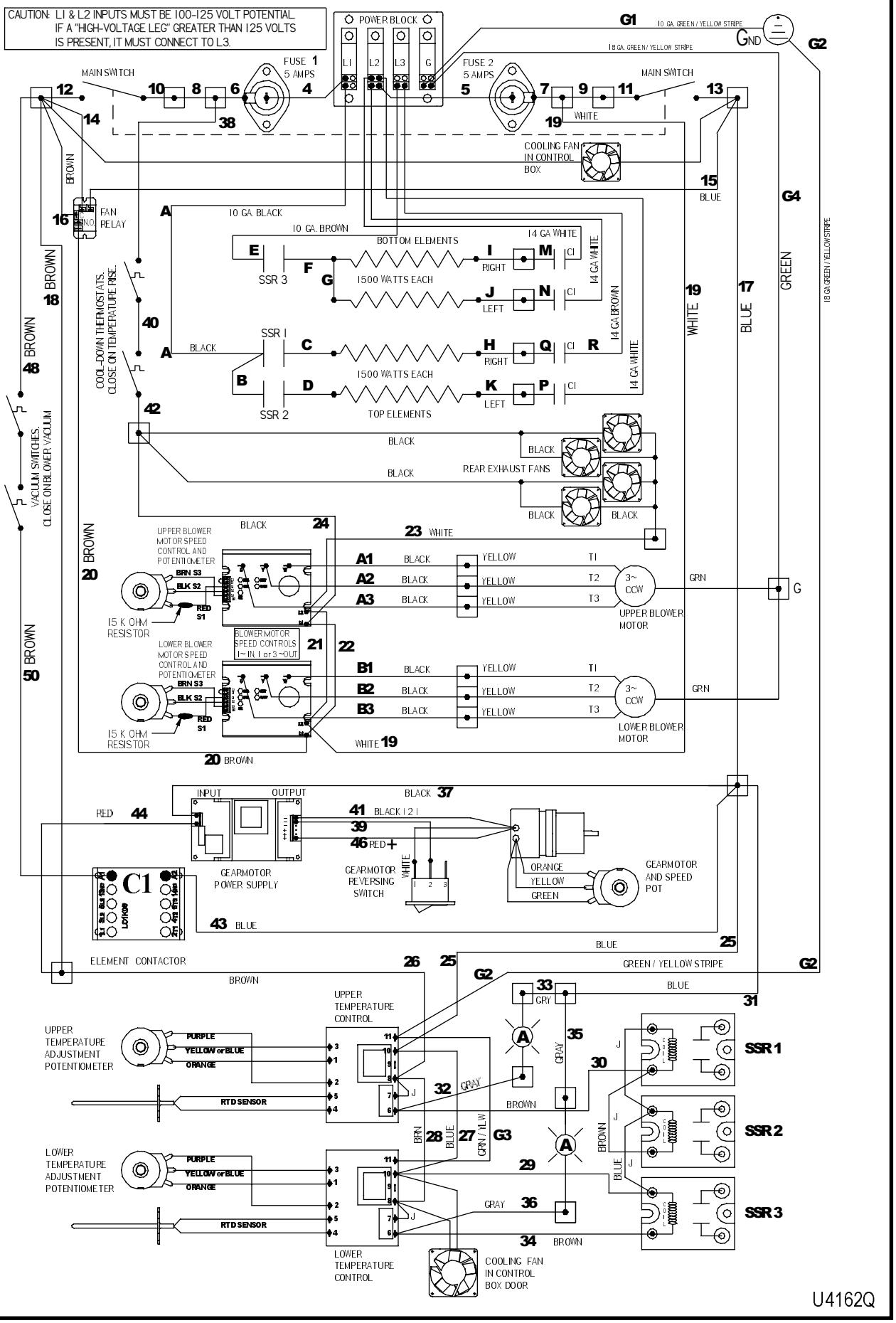
U4160Q

VHVA1620E Wiring Diagram 208, 220 or 240VAC, 50/60Hz, 1 Phase

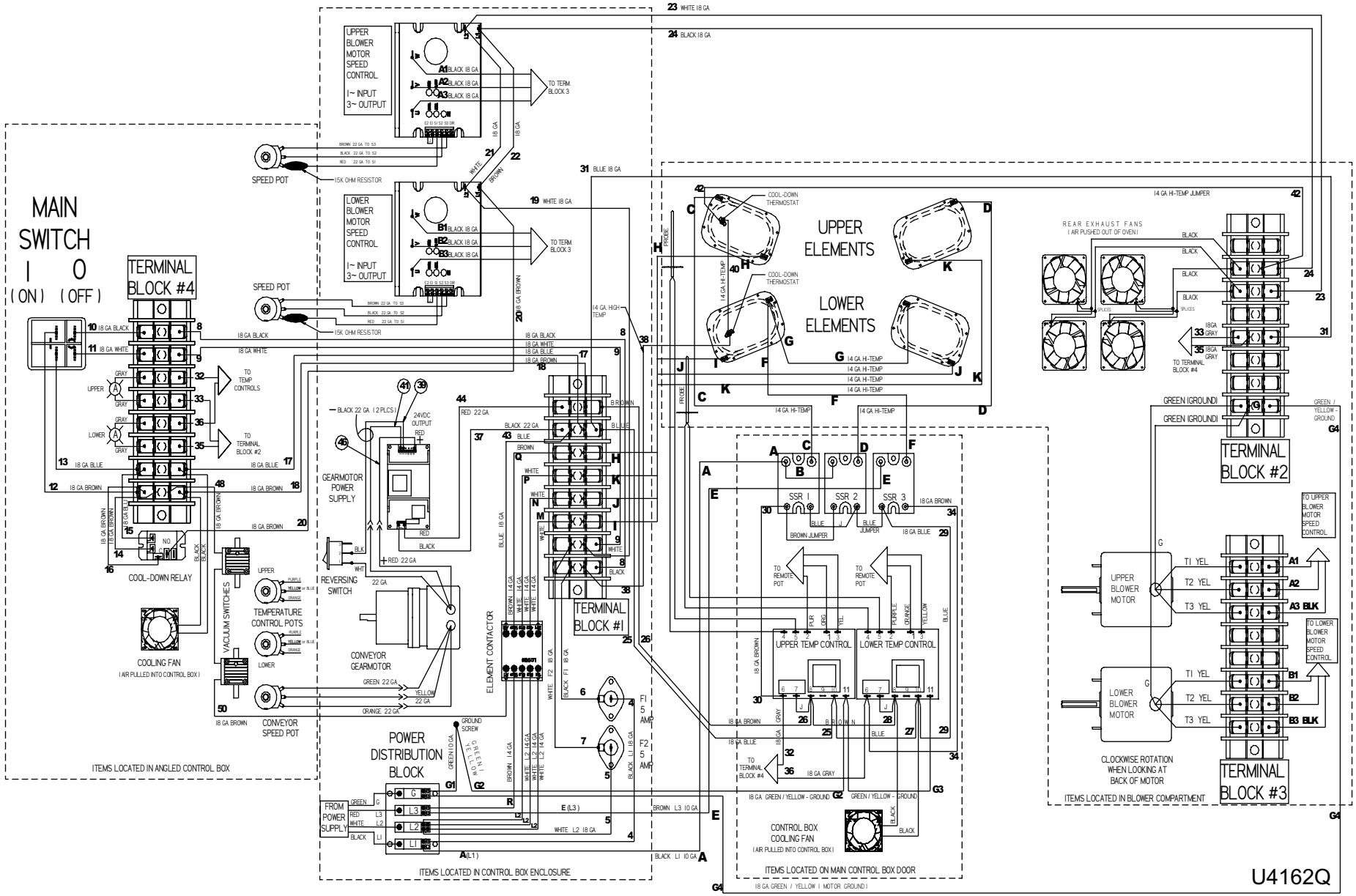


U4160Q

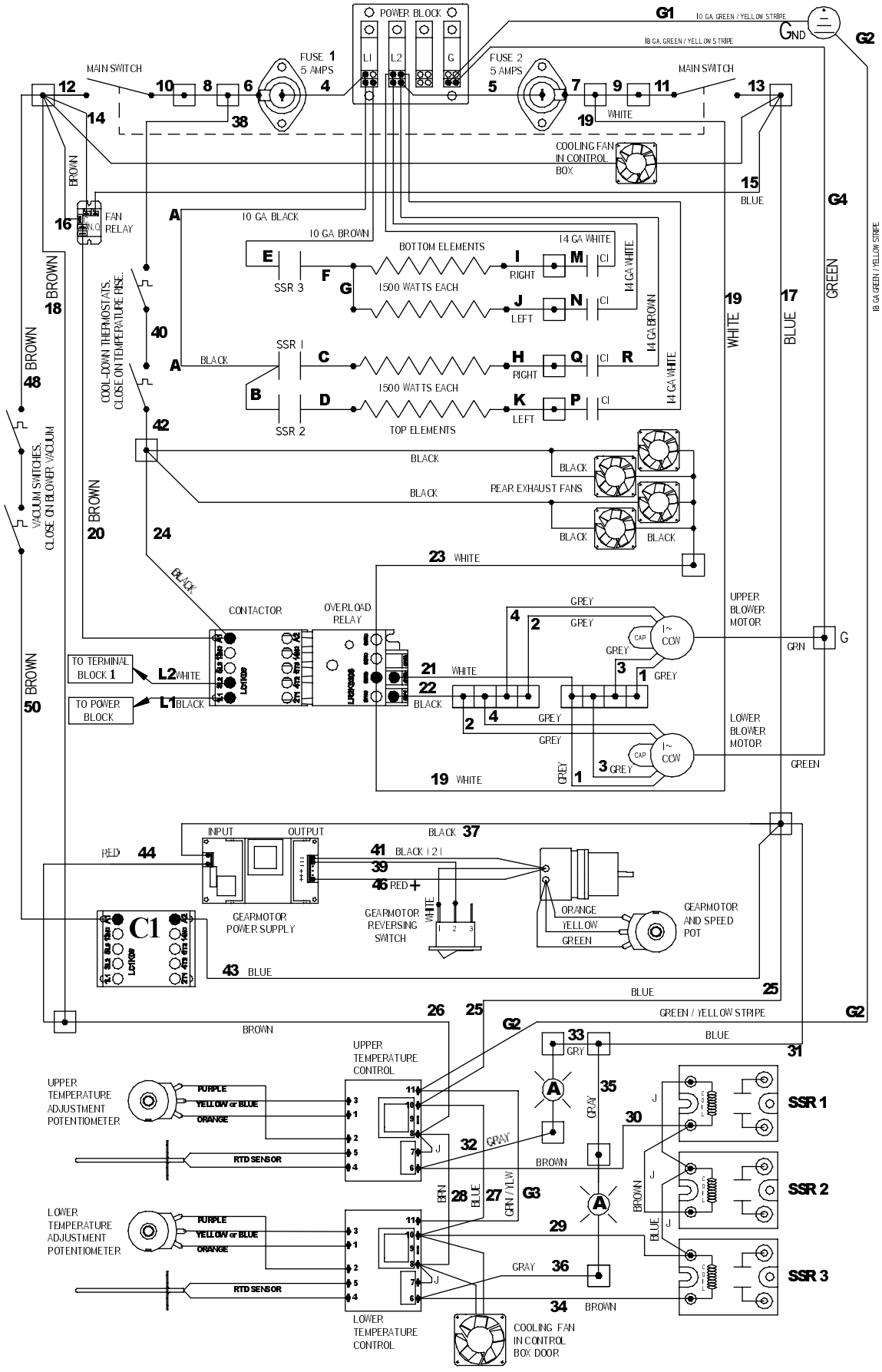
VHVA1620E Schematic 208, 220 or 240VAC, 50/60Hz, 3 Phase



VHVA1620E Wiring Diagram 208, 220 or 240VAC, 50/60Hz, 3 Phase

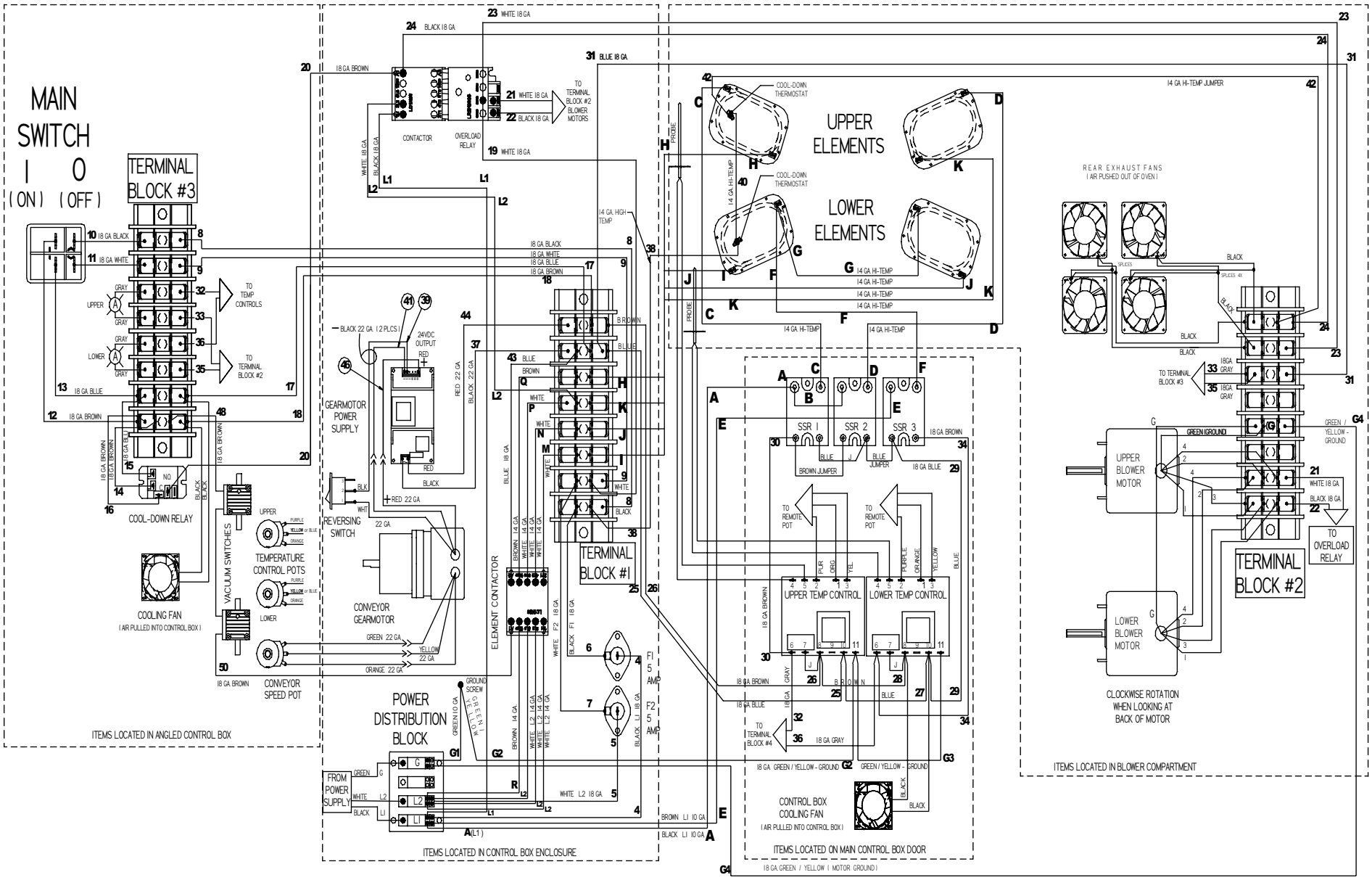


VH1620E Schematic 208, 220 or 240VAC, 50/60Hz, 1 Phase



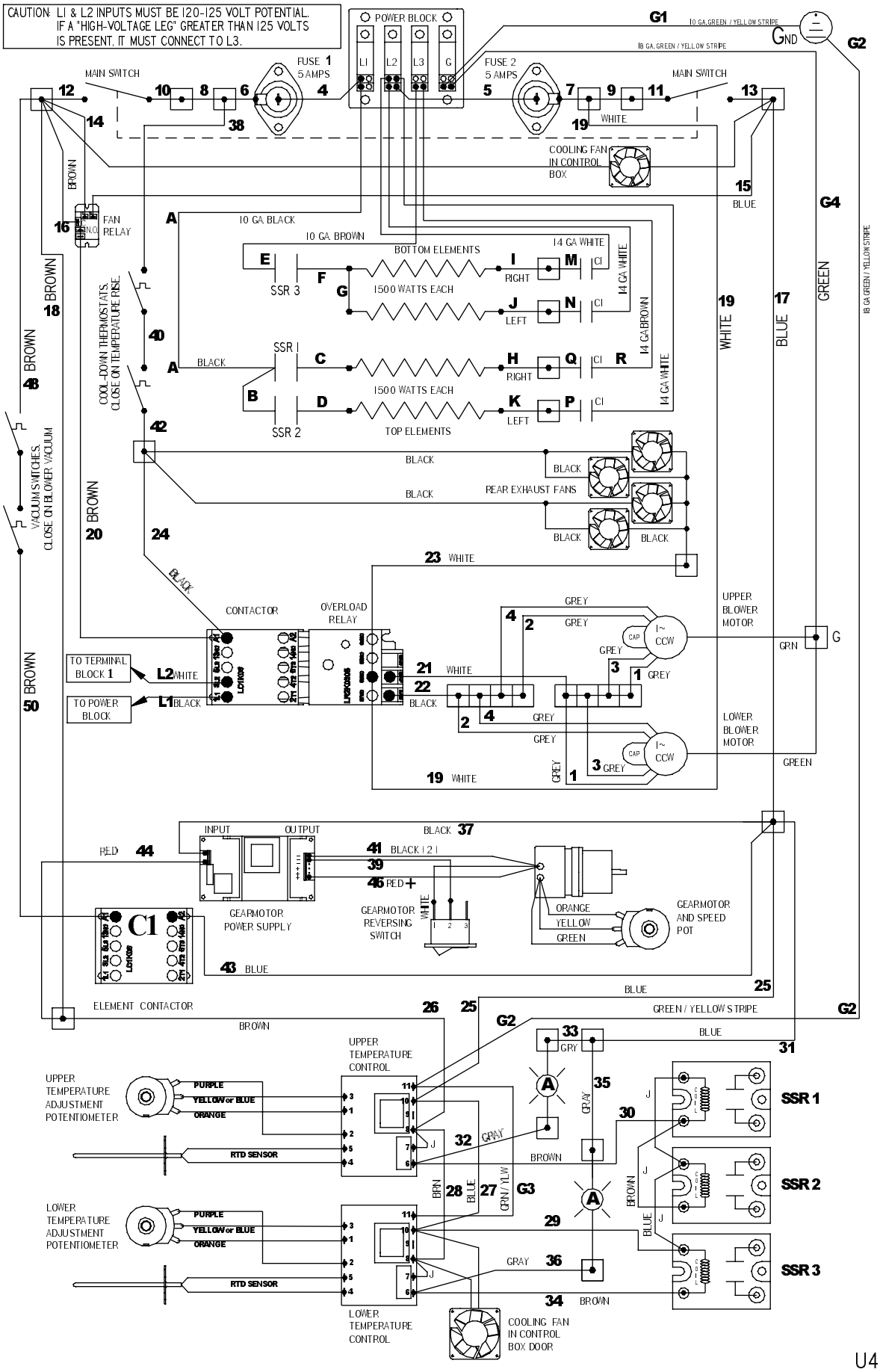
U4161Q

VH1620E Wiring Diagram 208, 220 or 240VAC, 50/60Hz, 1 Phase

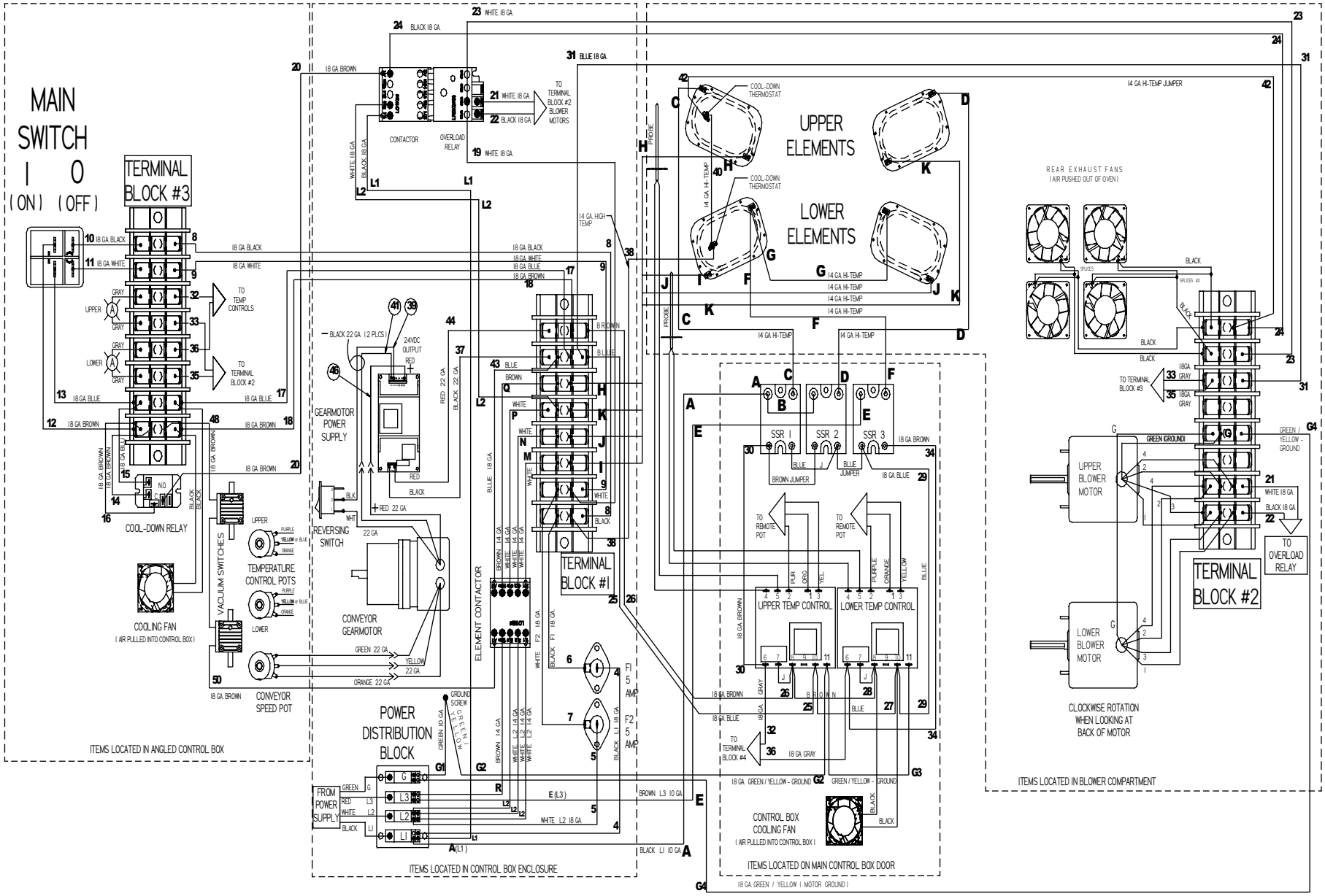


U4161Q

VH1620E Schematic 208, 220 or 240VAC, 50/60Hz, 3 Phase

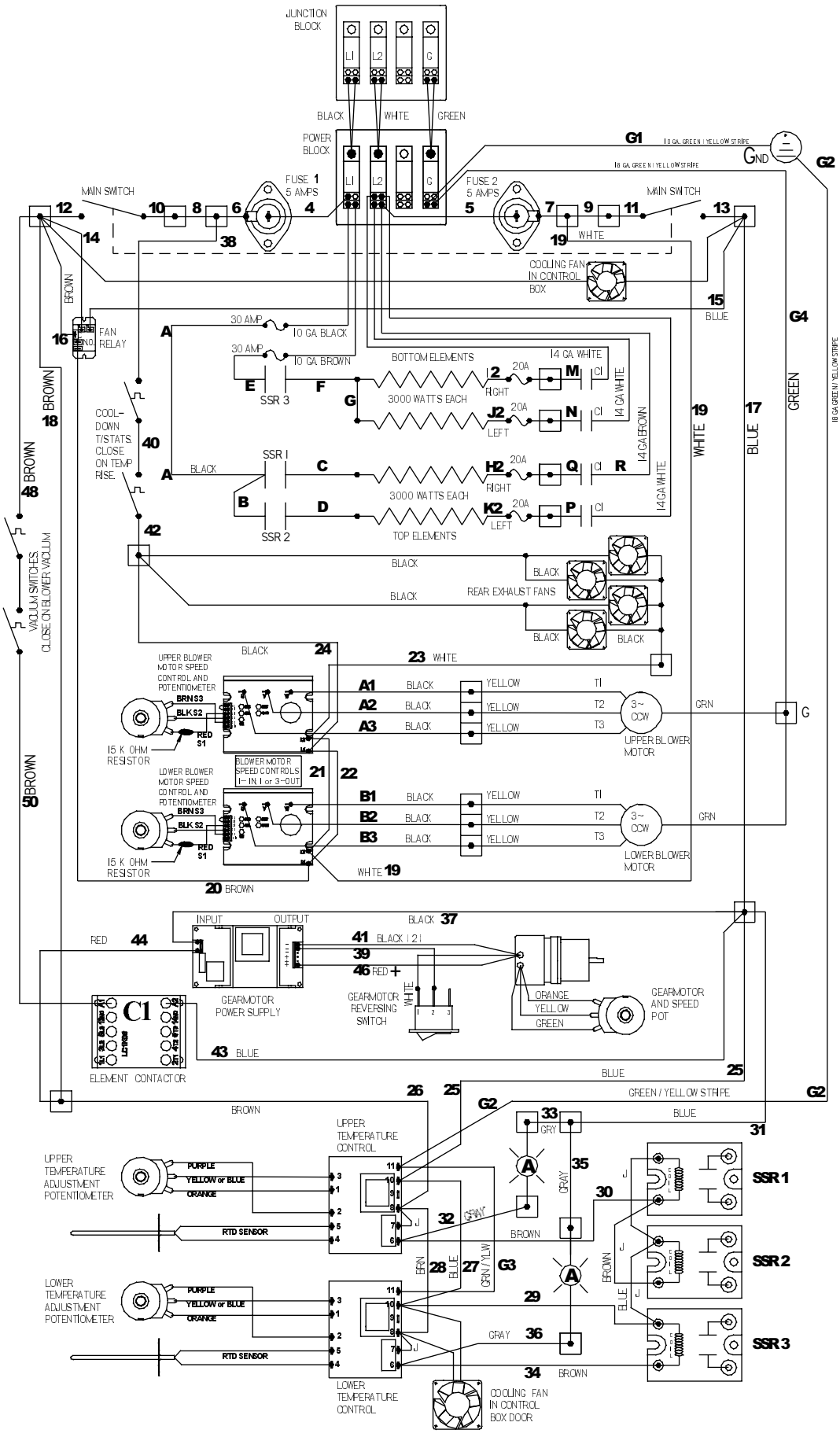


VH1620E Wiring Diagram 208. 220 or 240VAC, 50/60Hz, 3 Phase



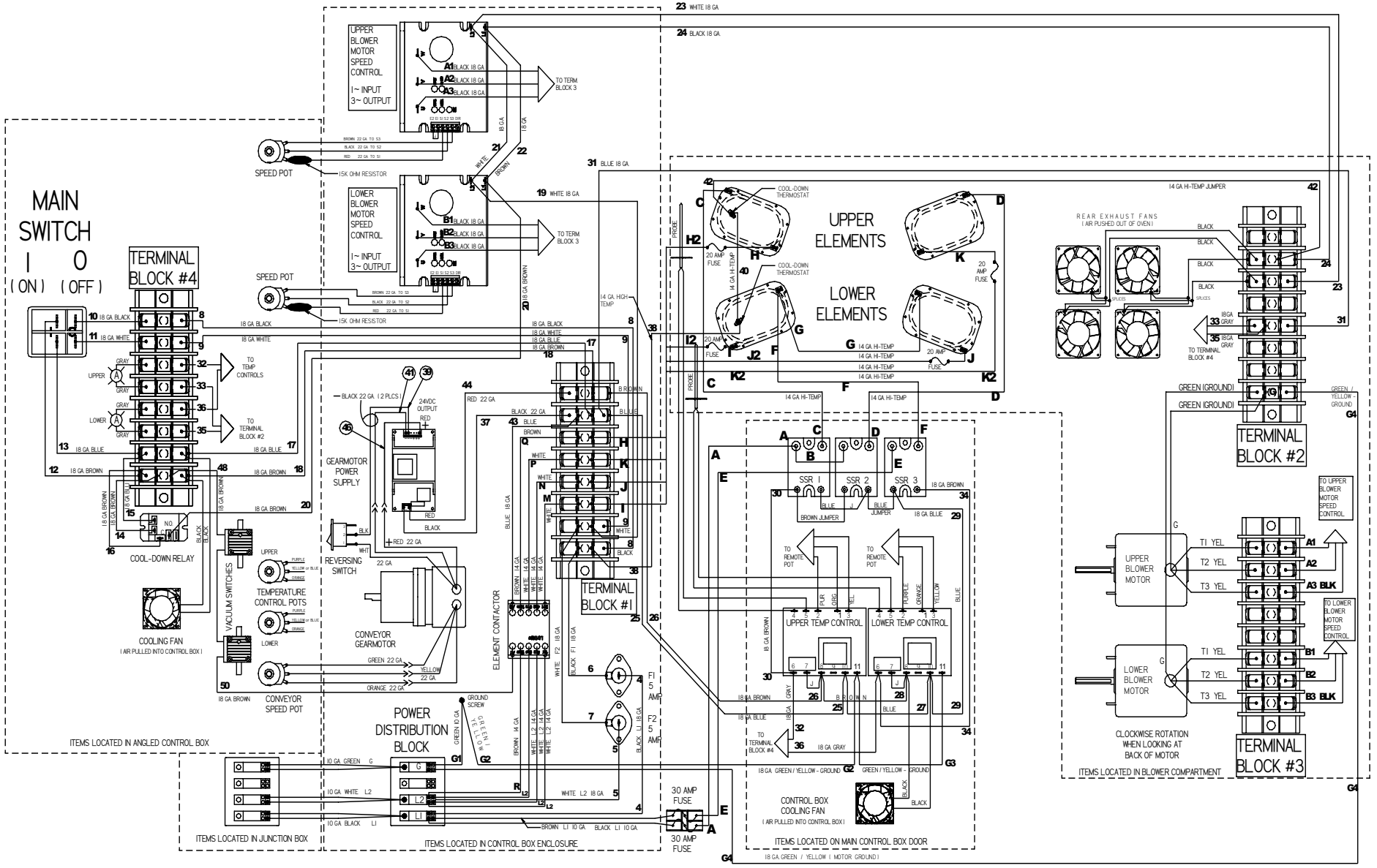
U4163U

VHVA1828E Schematic 208, 220 or 240VAC, 50/60Hz, 1 Phase



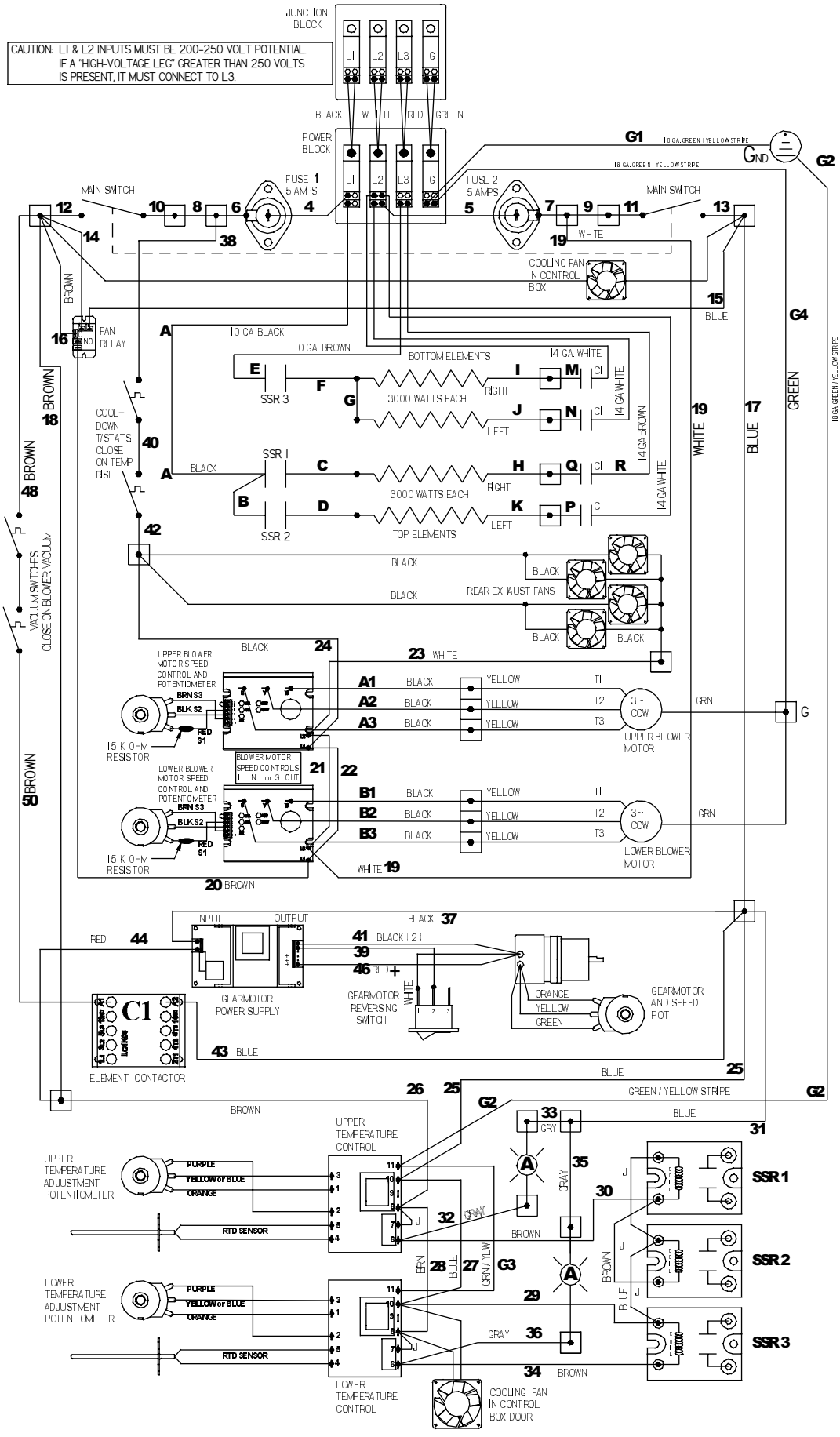
U4164Q

VHVA1828E Wiring Diagram 208. 220 or 240VAC, 50/60Hz, 1 Phase

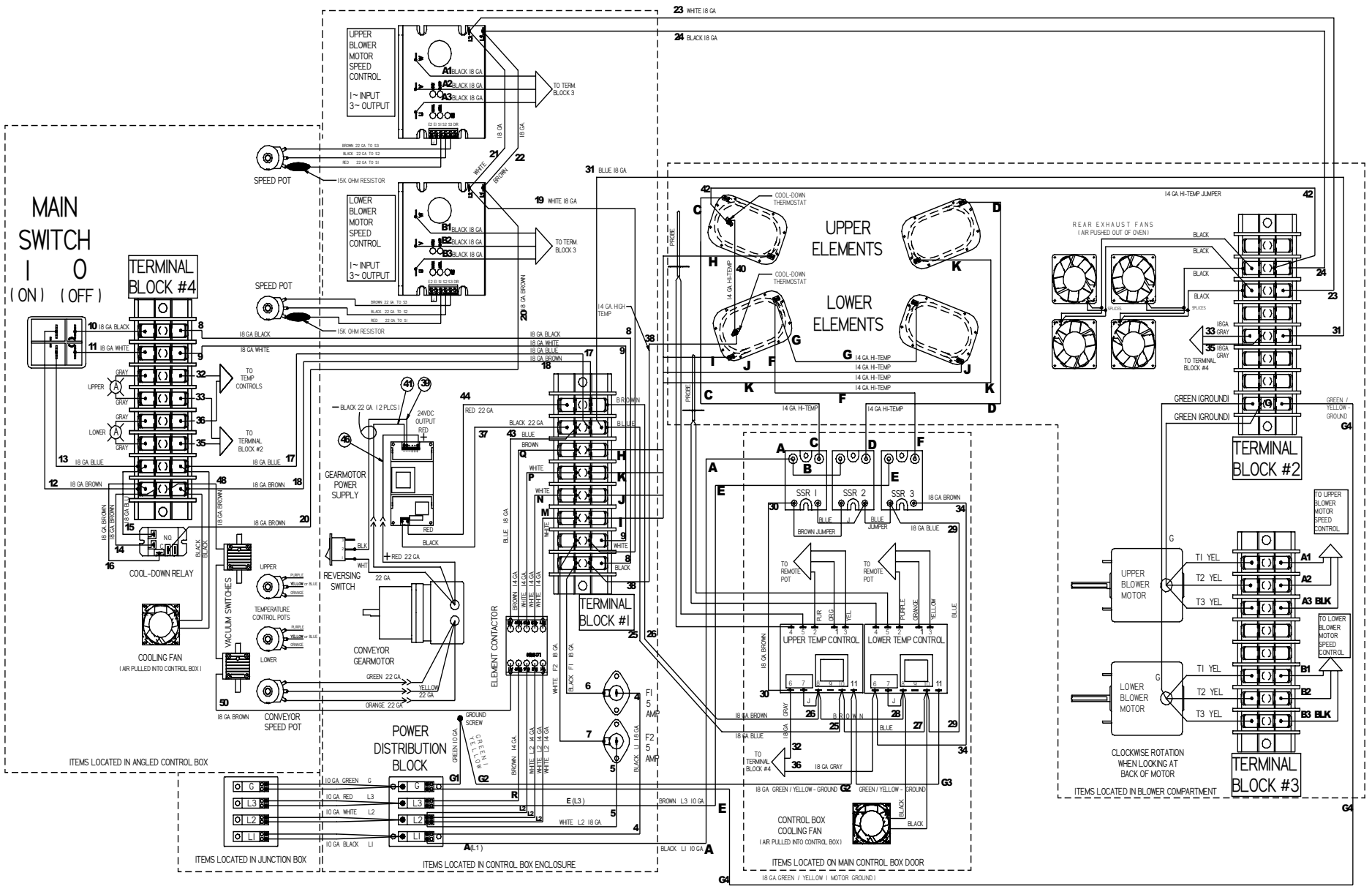


U4164Q

VHVA1828E Schematic 208, 220 or 240VAC, 50/60Hz, 3 Phase

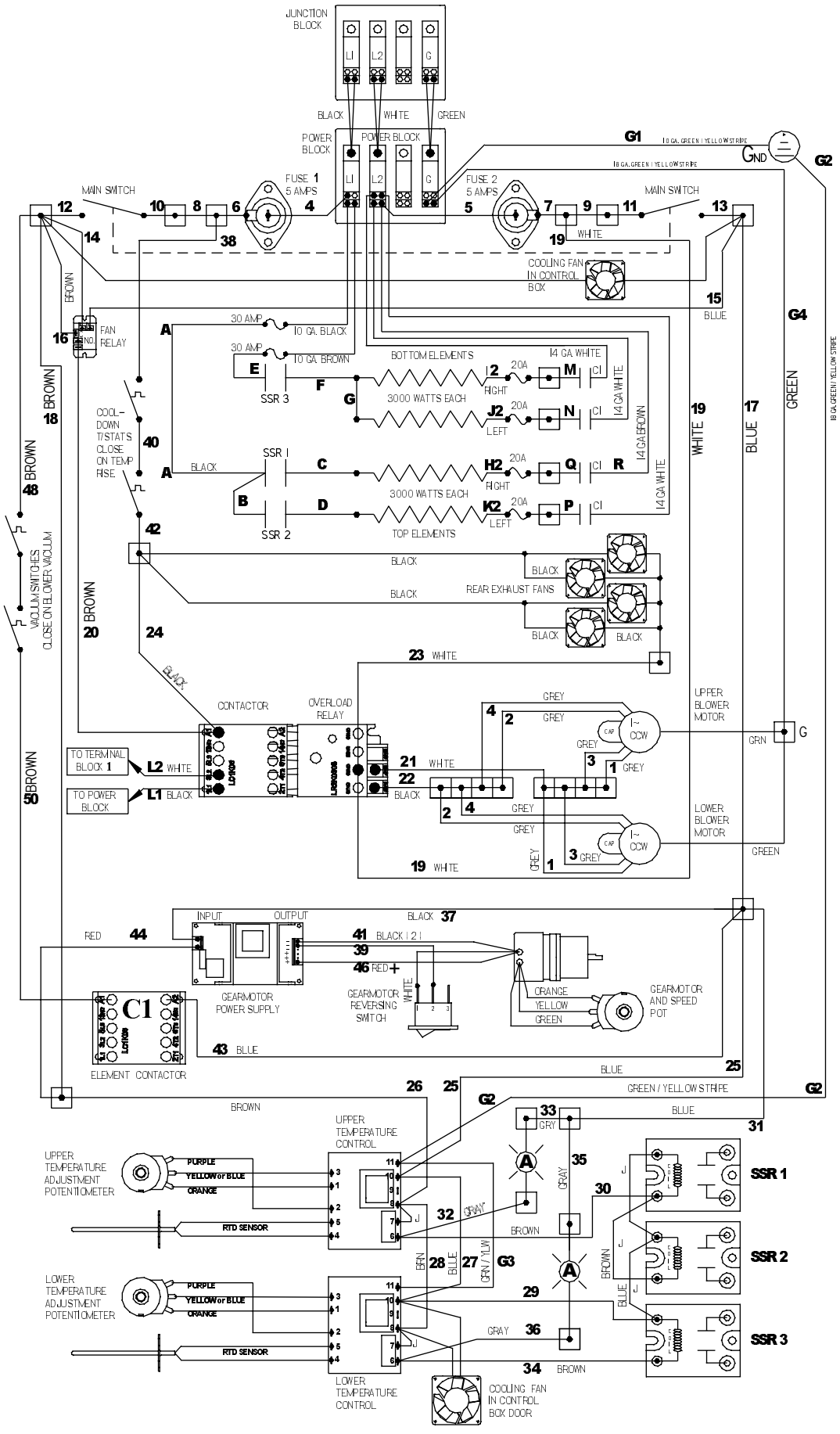


VHVA1828E Wiring Diagram 208, 220 or 240VAC, 50/60Hz, 3 Phase

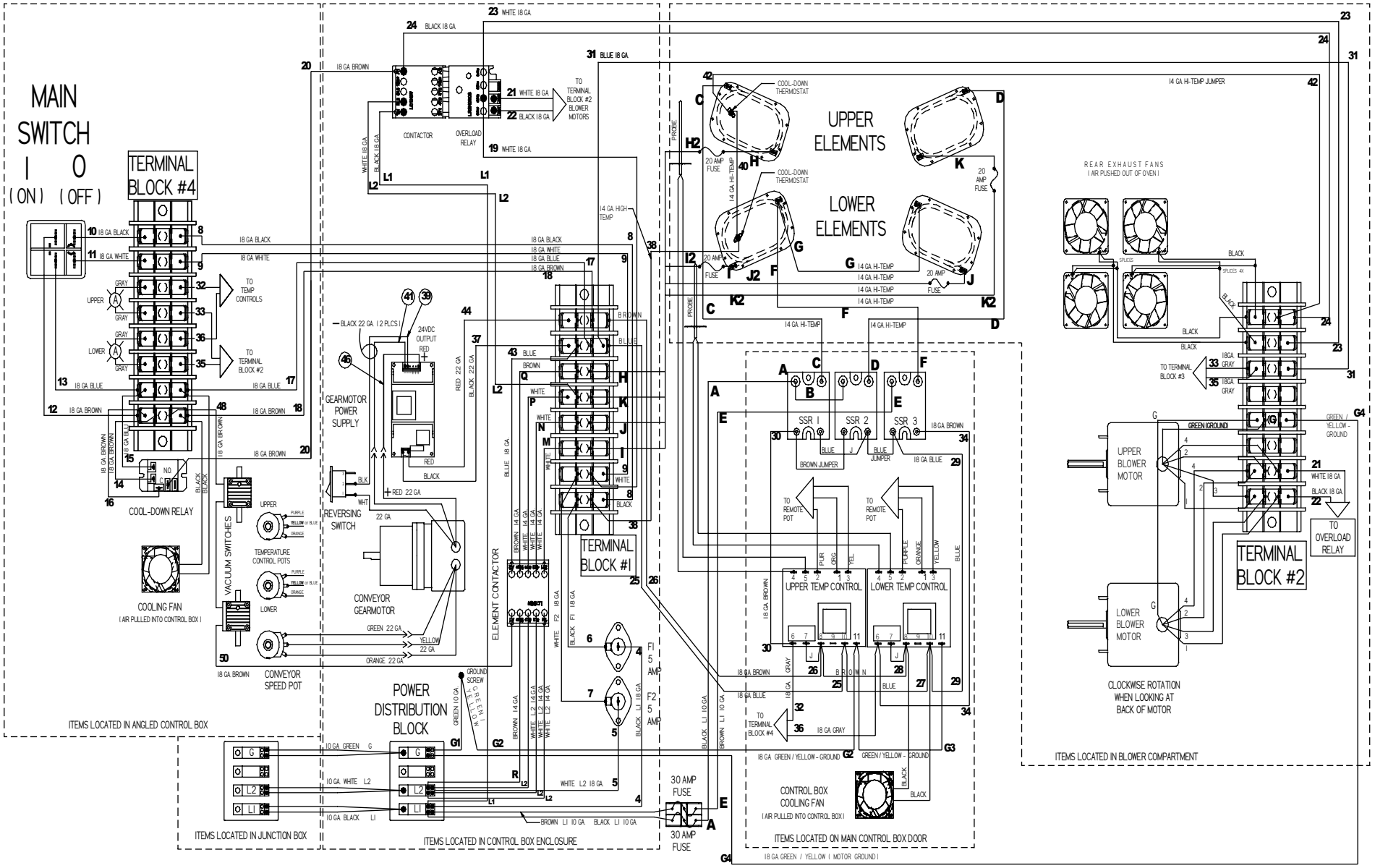


U4166Q

VH1828E Schematic 208, 220 or 240VAC, 50/60Hz, 1 Phase

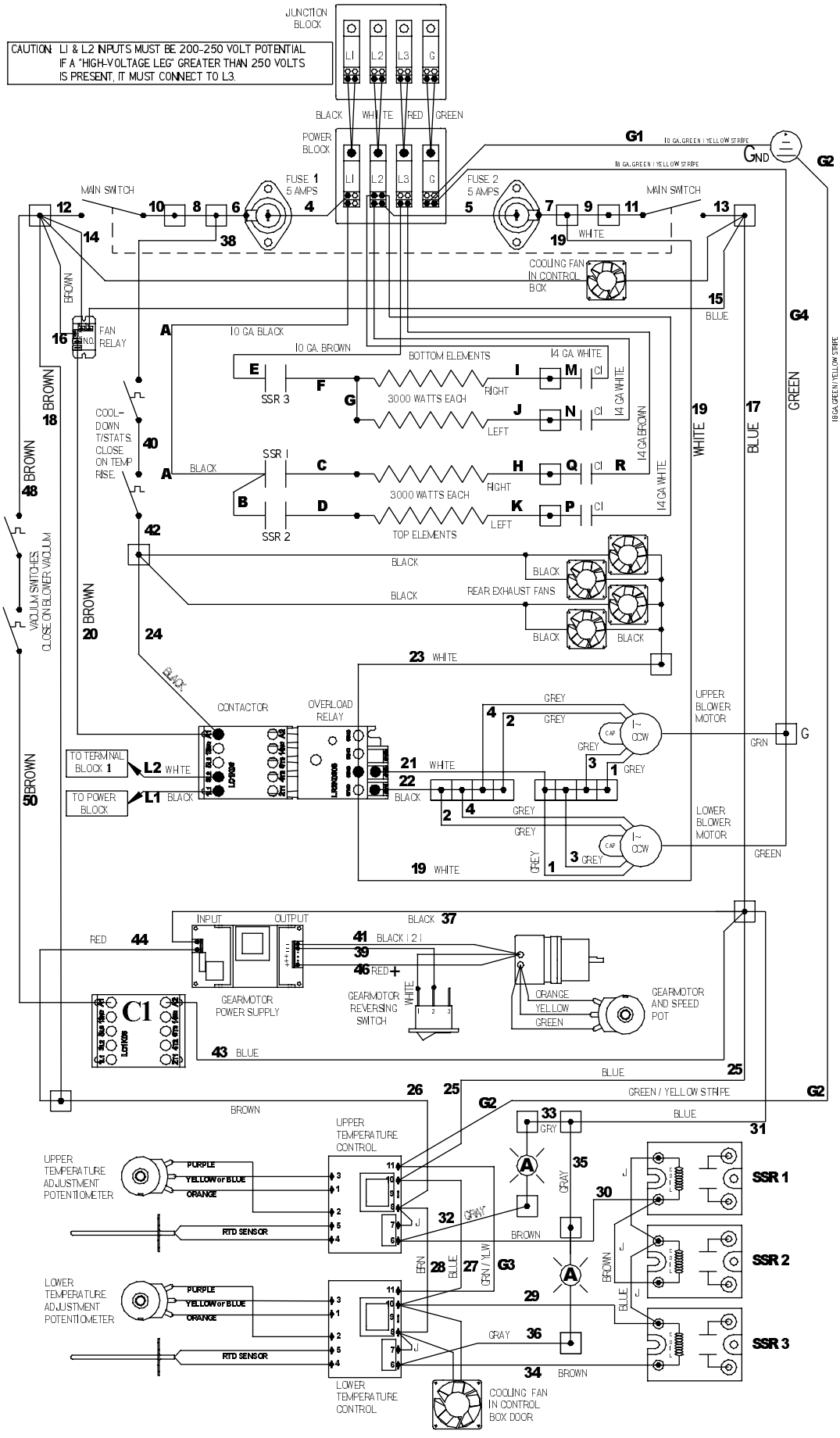


VH1828E Wiring Diagram 208, 220 or 240VAC, 50/60Hz, 1 Phase

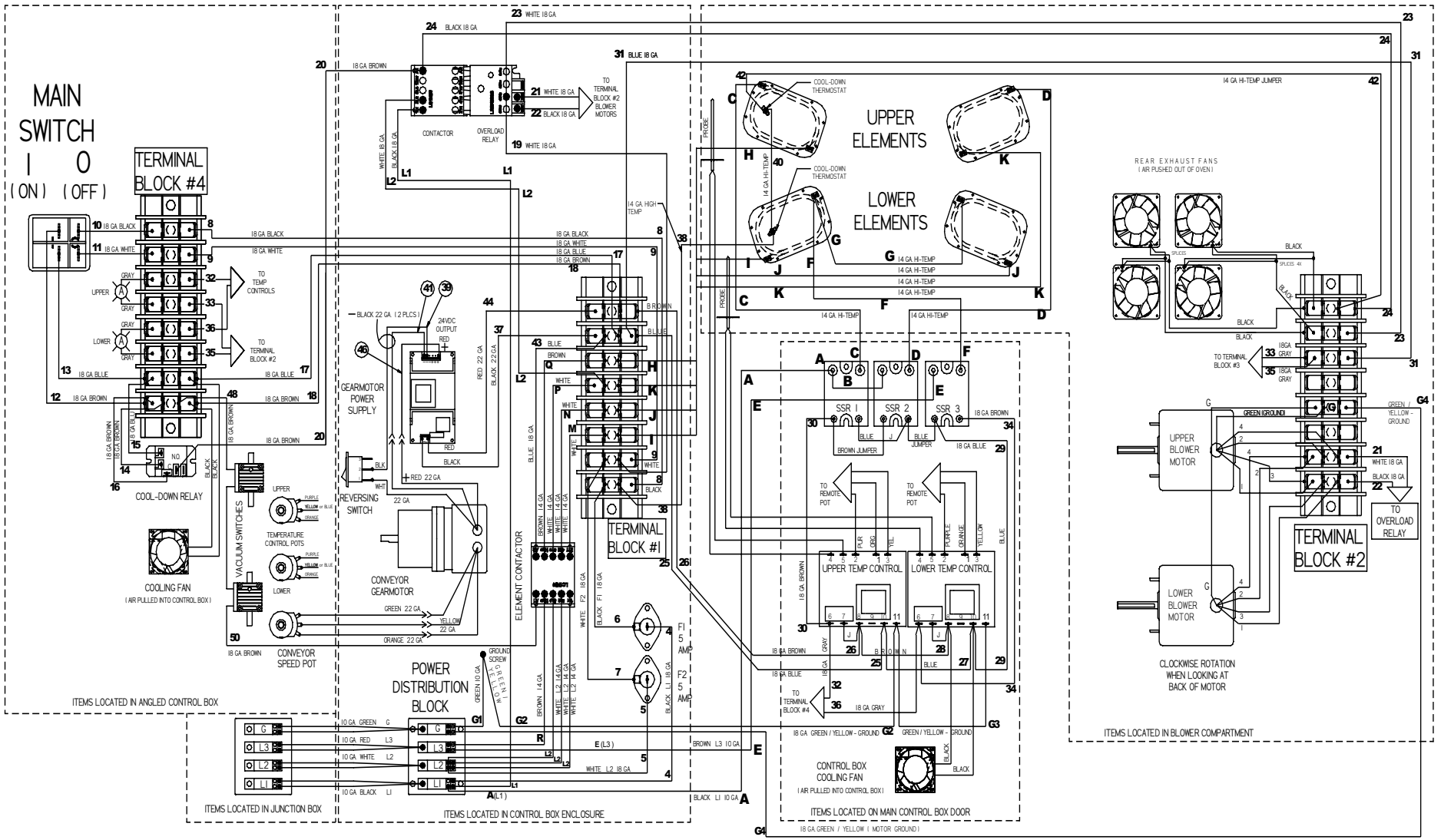


U4165Q

VH1828E Schematic 208, 220 or 240VAC, 50/60Hz, 3 Phase



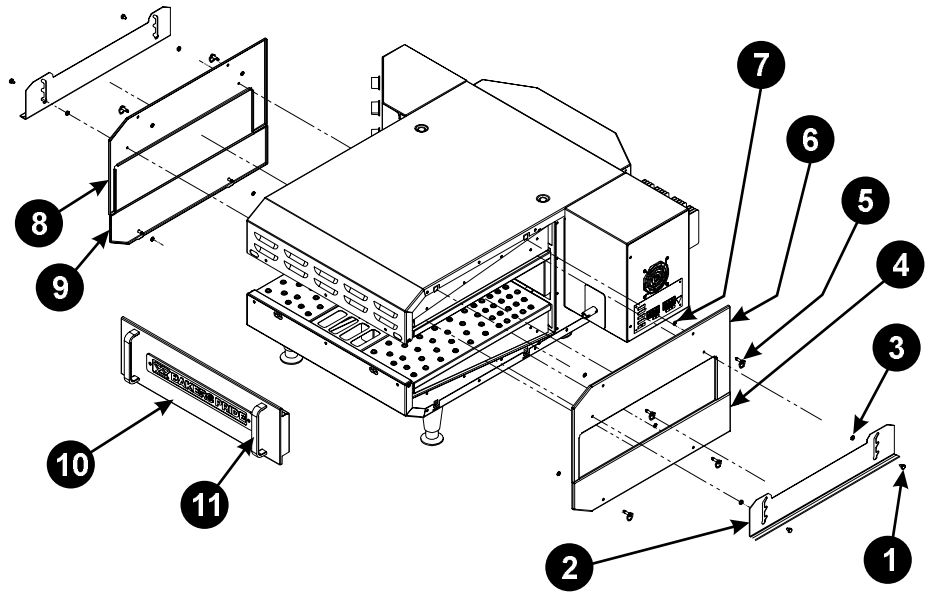
VH1828E Wiring Diagram 208, 220 or 240VAC, 50/60Hz, 3 Phase



U4167Q

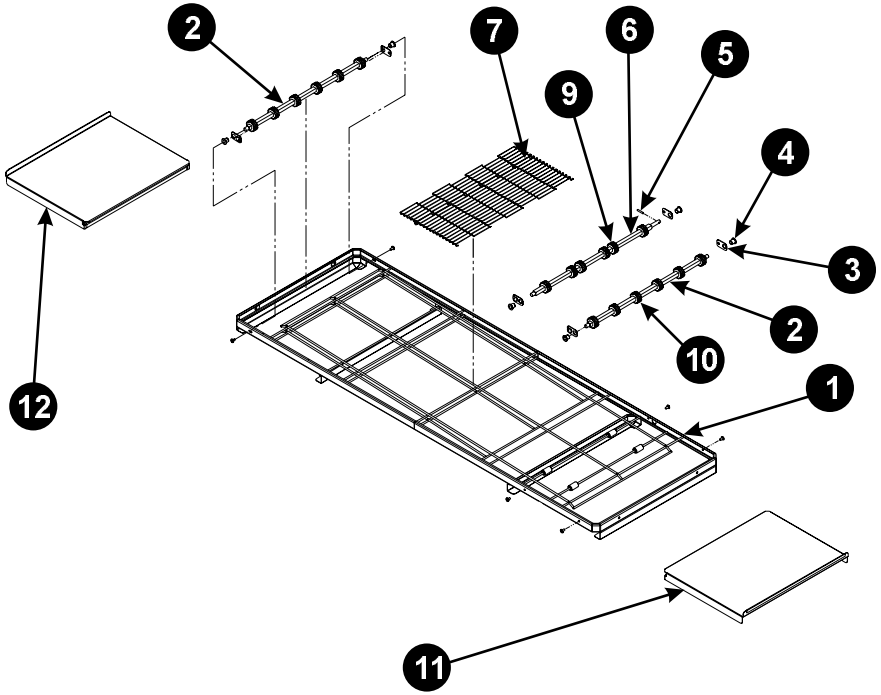
20. PARTS LISTS & EXPLODED VIEWS

Figure "A" External Covers



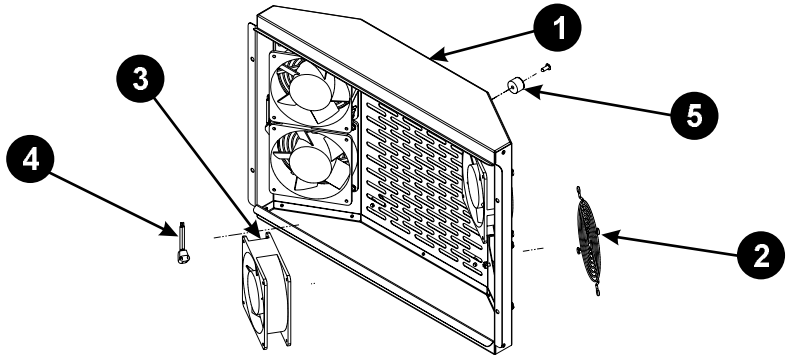
Item	Part Number		Description	Quan
	1620E	1828E		
1	S3255A	S3255A	Hanger Pin (For Item #2)	4
2	B6539K	B6051K	Adjustable Baffle	2
3	Q1499A	Q1499A	Lock Nut (For Item #1)	4
4	B6535U	B6037U	Outer Lower Cover, Right	1
5	Q4043A	Q4043A	1/4 Turn Fastener	8
6	B6536U	B6038U	Outer Upper Cover, Right	1
7	Q4044A	Q4044A	Retaining Ring (For Item #5)	8
8	B6538U	B6038U	Outer Upper Cover, Left	1
9	B6537U	B6037U	Outer Lower Cover, Left	1
10	B6584T	B6260T	Hinged Door Assy	1
11	S3256A	S3256A	Door Handle	2

Figure "B" Conveyor Assembly



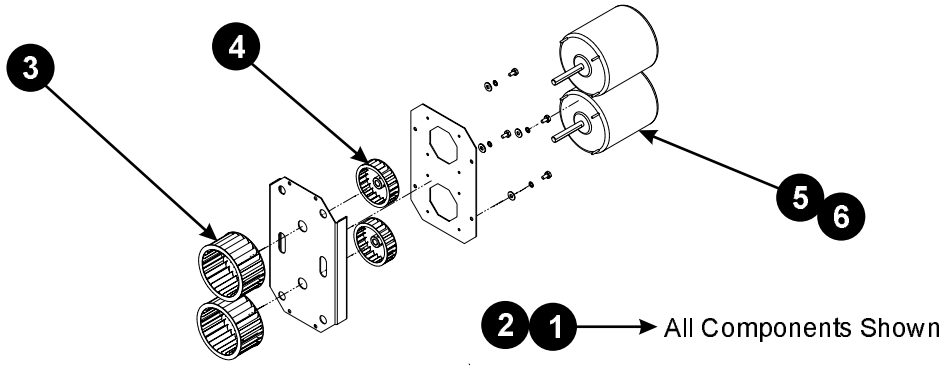
Item	Part Number		Description	Quan
	1620E	1828E		
1	B6546T	B7227T	Complete conveyor assy with wire belt	1
2	S3268U	S3266U	Idler shaft assy (complete w/sprockets)	2
3	B6068U	B6068U	Bearing clip assy	6
4	S3254A	S3254A	Plastic bearing	6
5	Q4045A	Q4045A	Drive pin in drive shaft	1
6	S3269U	S3267U	Drive shaft assy (complete w/sprockets)	1
7	S3252A	S3253A	Complete wire belt assembly	1
8	S3258A	S3259A	Wire belt master link (not shown)	2
9	S3270A	S3270A	Drive sprocket (metal)	6
10	S3250A	S3250A	Idler sprocket (plastic)	12
11	B6569U	B6087U	Discharge Extension Tray	1
12	B6571U	B6089U	Infeed Extension Tray	1

Figure “C” Blower Motor Cover Assembly



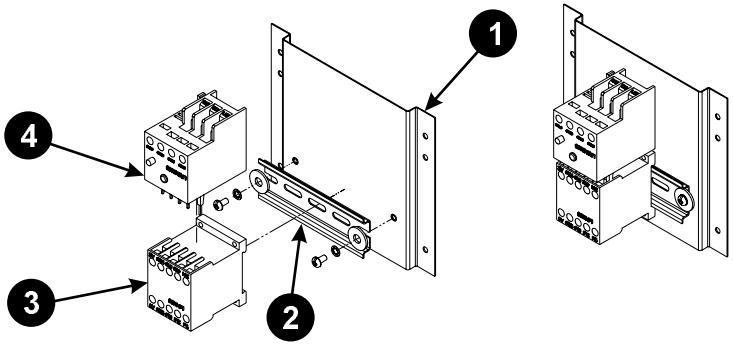
Item	Part Number 1620E	Part Number 1828E	Description	Quan
1	B6565U	B6219U	Rear Blower Motor Cover	1
2	M1504A	M1504A	Fan Guard	4
3	M1532A	M1532A	Large Axial Fan 220/240V	4
4	P6470A	P6470A	Fan Cord Assy	2
5	S1392A	S1392A	Rubber Bumper (Rear Exterior)	4

Figure “D” Blower Assembly



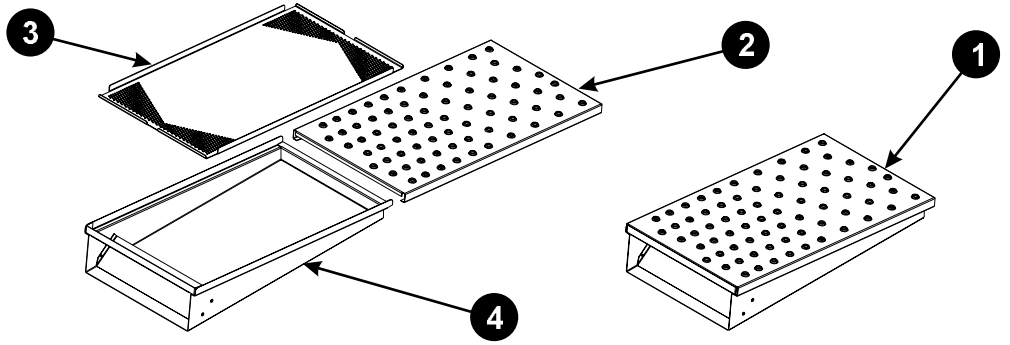
Item	Part Number 1620E	Part Number 1828E	Description	Quan
1	M1541U	M1537U	Complete Blower Assy, VH, 1 or 3 Ph	1
2	M1542U	M1511U	Complete Blower Assy, VHVA, 1 or 3 Ph	1
3	M1515A	M1510A	Main Blower Wheel	1
4	S3260A	S3260A	Minor Wheel (Heat Slinger)	2
5	M1548A	M1548A	Blower Motor, 1/4 HP, VH, 1 or 3 Ph	2
6	M1511A	M1511A	Blower Motor, 1/4 HP, VHVA, 1 or 3 Ph	2

Figure “E” VH Series Ovens Only



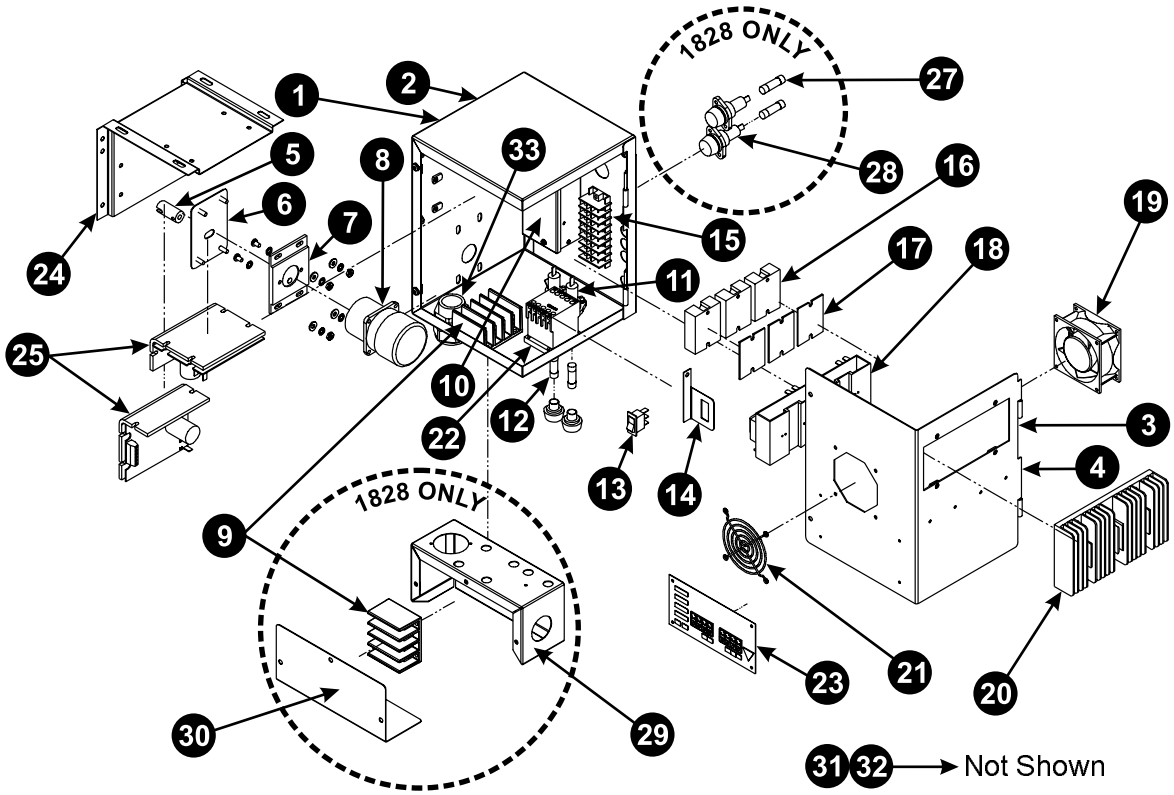
Item	Part Number 1620E	Part Number 1828E	Description	Quan
1	B6086U	B6086U	Mount Bracket Assy	1
2	P1150A	P1150A	DN Rail	1
3	M1378A	M1378A	Contactor	1
4	M1379A	M1379A	Overload Relay	1

Figure “F” Plenum “Finger” Assembly



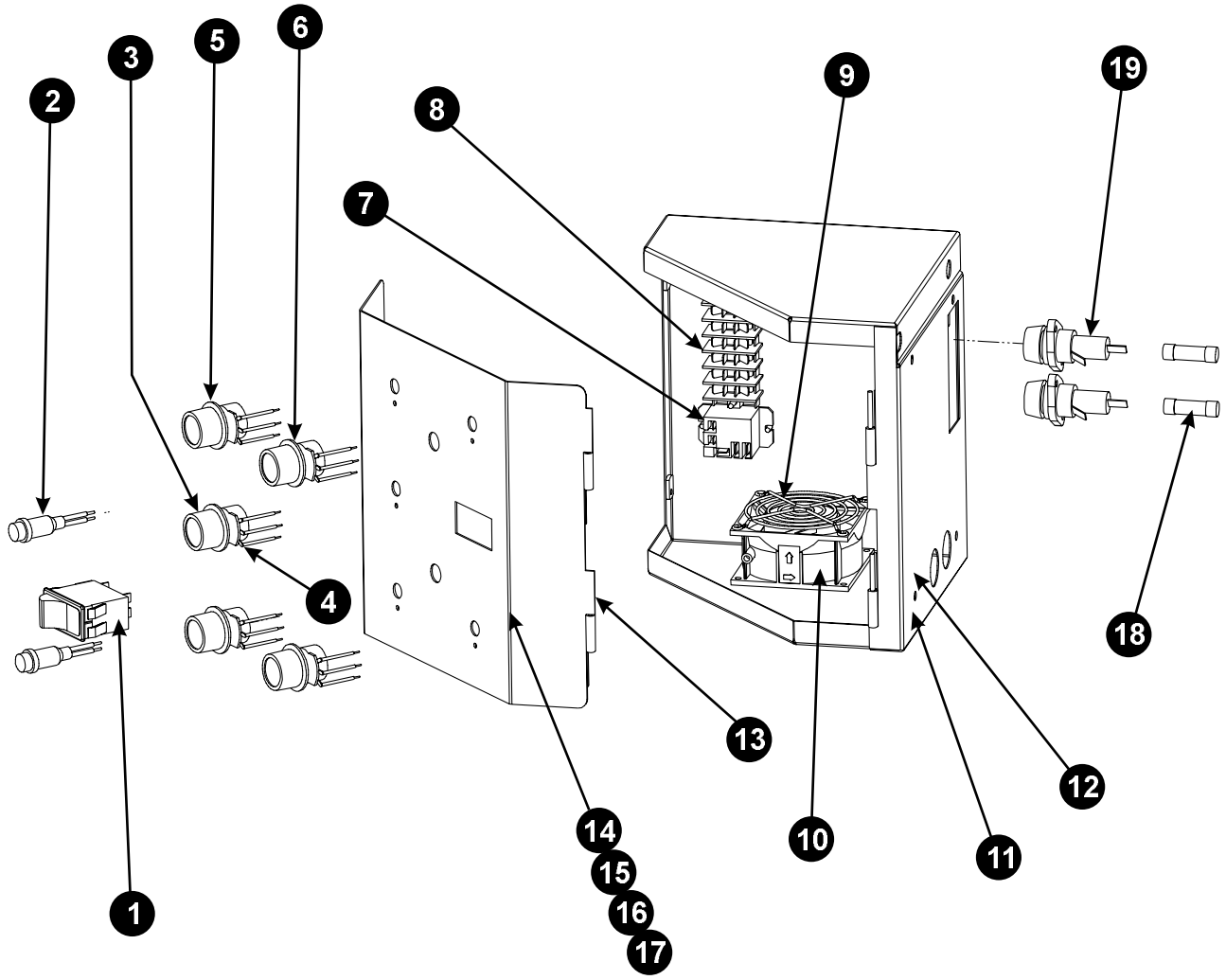
Item	Part Number 1620E	Part Number 1828E	Description	Quan
1	B6529T	B6221T	Complete Plenum "Finger" Assy (Items 2, 3 & 4)	4
2	B6531K	B6225K	Outer "Perforated" Panel	4
3	B6532K	B6226K	Inner Perforated Panel	4
4	B6530U	B6222U	Main Body Panel	4

Figure "G" Main Power Control Box



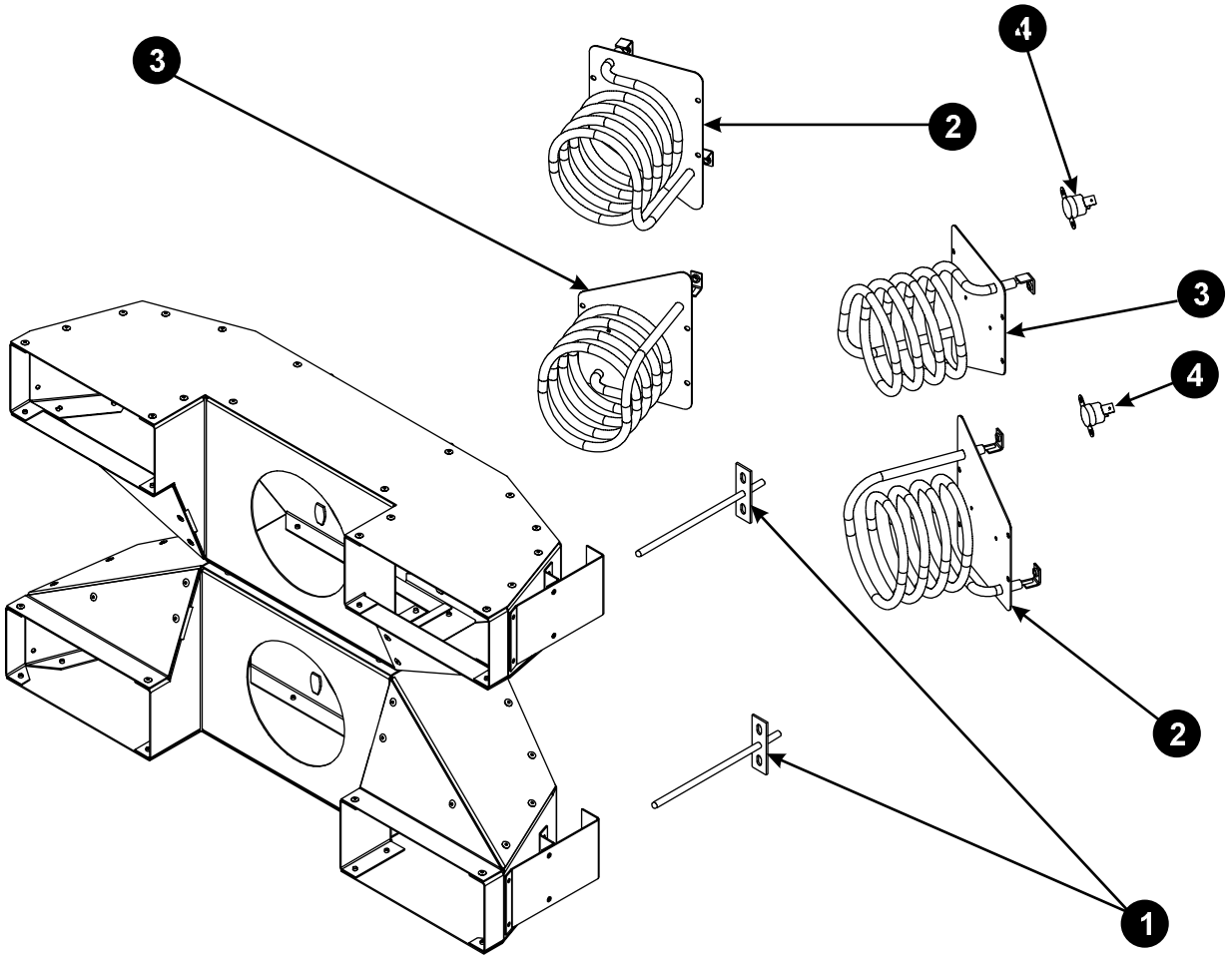
Item	Part Number		Description	Quan
	1620E	1828E		
1	B6562T	B6071T	Main Control Box Assy (Complete w/items 5-15 & 22)	1
2	B6562U	B6071U	Main Control Box Only (Bare)	1
3	B6564T	B6072T	Hinged Door Assy (Complete w/items 16-21 & 23)	1
4	B6564U	B6072U	Hinged Door Only (Bare)	1
5	S3262A	S3262A	Gearmotor Coupling	1
6	B6074U	B6074U	Gearmotor Adjustment Plate	1
7	S3263A	S3263A	Gearmotor Adapter Plate	1
8	M1501A	M1501A	Gearmotor - Belt Conveyor Drive	1
9	P1175A	P1175A	Power Distribution Terminal Block (1620 Uses 1, 1828 Uses 2)	1 or 2
10	M1538A	M1538A	Gearmotor Power Supply	1
11	P1064A	P1064A	Fuseholder w/Cap	2
12	P1190A	P1190A	Fuse SC-5 Amp	2
13	M1307A	M1307A	Gearmotor Reversing Switch	1
14	B6079K	B6079K	Reversing Switch Mounting Bracket	1
15	P1170A	P1170A	Terminal Block	1
16	M1517A	M1517A	Solid State Relay	3
17	M1525A	M1525A	Thermal Pad	3
18	M1500A	M1500A	Temperature Control	2
19	M1235A	M1235A	Cooling Fan	1
20	M1521A	M1521A	Heat Sink	1
21	M1524A	M1524A	Fan Guard	1
22	M1378A	M1378A	Contactor	1
23	U1061A	U1060A	Rating Plate	1
24	B6073U	B6073U	Air Speed Control Mount Bracket Assy (VHVA Only)	1
25	M1529A	M1529A	Air Blower Speed Control (208V Only) (VHVA Only)	2
26	M1513A	M1513A	Air Blower Speed Control (240V Only) (VHVA Only)	2
27	N/A	P1008A	Fuse SC-20 Amp (1828 Single-phase Only)	2
28	N/A	P1007A	Fuseholder w/Cap (1828 Single-phase Only)	2
29	N/A	B6250K	Junction Box (1828 Only)	1
30	N/A	B6251K	Cover, Junction Box (1828 Only)	1
31	P6486A	N/A	Power Cord Assembly, Single-phase (Not Shown)	1
32	P6469A	N/A	Power Cord Assembly, Three-phase (Not Shown)	1
33	P1172A	N/A	Strain Relief	1

Figure "H" Electric Control Box



Item	Part Number		Description	Quan	
	208 Volt	240 Volt		VH	VHVA
1	M1352A	M1352A	Main Switch	1	1
2	P1171A	P1171A	Indicator Light (On for Heat Demand)	2	2
3	S1205A	S1205A	Knob	3	5
4	M1519A	M1519A	Potentiometer (Conveyor Belt Speed Adjust)	1	1
5	M1531A	M1531A	Potentiometer (Air Blower Speed Adjust)	0	2
6	M1505A	M1505A	Potentiometer (Air Temperature Control)	2	2
7	M1533A	M1535A	Relay	1	1
8	P1170A	P1170A	Terminal Block	1	1
9	M1524A	M1524A	Fan Guard	2	2
10	M1235A	M1235A	Cooling Fan	1	1
11	B6237T	B6237T	Electric Control Box (w/items 8, 9, 11, & 12)	1	1
12	B6237U	B6237U	Electric Control Box Only	1	1
13	B6236U	B6236U	Hinged Door Assy	1	1
14	U1370A	U1370A	Door Label (VH1620E)	1	0
15	U1366A	U1366A	Door Label (VH1828E)	1	0
16	U1369A	U1369A	Door Label (VHVA1620E)	0	1
17	U1365A	U1365A	Door Label (VHVA1828E)	0	1
18	N/A	P1008A	Fuse SC-20A (1828 Single-phase Only)	2	2
19	N/A	P1007A	Fuseholder w/Cap (1828 Single-phase Only)	2	2

Figure "I" Cool-Down Thermostat, Elements, Switch & Probe



Item	Part Number								Description	Quan
	Model 1620E				Model 1828E					
	208V	220V	230V	240V	208V	220V	230V	240V		
1	M1518A	M1518A	M1518A	M1518A	M1518A	M1518A	M1518A	M1518A	Temperature Sensor Probe	2
2	L1181A	L1189A	L1207A	L1183A	L1185A	L1191A	L1209A	L1187A	Heating Element, Left Hand	2
3	L1182A	L1190A	L1208A	L1184A	L1186A	L1192A	L1210A	L1188A	Heating Element, Right Hand	2
4	M1534A	M1534A	M1534A	M1534A	M1534A	M1534A	M1534A	M1534A	Cool-Down Thermostat	2

21. BAKERS PRIDE LIMITED WARRANTY

30 Pine Street New Rochelle, New York 10801
914 / 576 - 0200 US & Canada: 1 - 800 - 431 - 2745 fax 914 / 576 - 0605

WHAT IS COVERED This warranty covers defects in material and workmanship under normal use, and applies only to the original purchaser providing that:

- The equipment has not been accidentally or intentionally damaged, altered or misused;
- The equipment is properly installed, adjusted, operated and maintained in accordance with National and local codes. and in accordance with the installation instruction provided with the product;
- The serial number rating plate affixed to the equipment has not been defaced or removed.

WHO IS COVERED This warranty is extended to the original purchaser and applies only to equipment purchased for use in the U.S.A.

COVERAGE PERIOD Full size gas and electric deck ovens: Two (2) year limited parts and labor: Cyclone Convection Ovens: BCO Models: One (1) Year limited parts and labor; GDCO Models: Two (2) Year limited parts and labor; CO II Models: Two (2) Year limited parts and labor; (5) Year limited door warranty.
All Other Products: One (1) Year limited parts and labor.
Warranty period begins the date of dealer invoice to customer or ninety (90) days after shipment date from BAKERS PRIDE - whichever comes first.

WARRANTY COVERAGE This warranty covers on-site labor, parts and reasonable travel time and travel expenses of the authorized service representative up to (100) miles. round trip, and (2) hours travel time. The purchaser. however, shall be responsible for all expenses related to travel, including time. mileage and shipping expenses on smaller counter models that may be carried into a Factory Authorized Service Center, including the following models: PX-14. PX-16, PI8, and BK-I8.

EXCEPTIONS All removable parts in BAKERS PRIDE Char-broilers, including but not limited to: Burners, Grates. Radiants, Stones and Valves, are covered for a period of SIX MONTHS.
All Ceramic Baking Decks are covered for a period of THREE MONTHS. The installation of these replacement decks is the responsibility of the purchaser.
The extended Cyclone door warranty years 3 through 5 is a parts only warranty and does not include labor, travel, milage or any other charges.

EXCLUSIONS

Negligence or acts of God,
Thermostat calibrations after (30) days from equipment installation date,
Air and Gas adjustments,
Light bulbs,
Glass doors and door adjustments.
Fuses,
Char-broiler work decks and cutting boards,
Tightening of conveyor chains,
Adjustments to burner flames and cleaning of pilot burners,
Tightening of screws or fasteners.
Failures caused by erratic voltages or gas supplies,
Unauthorized repair by anyone other than a BAKERS PRIDE Factory Authorized Service Center,
Damage in shipment,
Alteration, misuse or improper installation,
Thermostats and safety valves with broken capillary tubes.
Accessories - spatulas, forks. steak turners, grate lifters, oven brushes, scrapers, peels. etc.,
Freight - other than normal UPS charges,
Ordinary wear and tear.

INSTALLATION Leveling and installation of decks. as well as proper installation and check out of all new equipment - per appropriate installation and use materials - is the responsibility of the dealer or installer, not the manufacturer.

REPLACEMENT PARTS BAKERS PRIDE genuine Factory OEM parts receive a (90) day materials warranty effective from the date of installation by a BAKERS PRIDE Factory Authorized Service Center.

This Warranty is in lieu of all other warranties, expressed or implied, and all other obligations or liabilities on the manufacturers part. BAKERS PRIDE shall in no event be liable for any special, indirect or consequential damages, or in any event for damages in excess of the purchase price of the unit. The repair or replacement of proven defective parts shall constitute a fulfillment of all obligations under the terms of this warranty.

Form #U4177A 1/07

BAKERS PRIDE OVEN CO., INC.
30 Pine Street
New Rochelle, NY 10801
(914) 576-0200 Phone
(914) 576-0605 Fax
(800) 431-2745 US & Canada
www.bakerspride.com Web Address